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Goal Line  
Technology  
Cashless  
Payment  
High Speed  
SSDs



## IFA 2015

We Take A Look At The Latest And Greatest Products  
Shown At Germany's Consumer Tech Showcase

REVIEWS: MSI GTX 980 Ti Lightning,  
PowerColor R9 390X Devil, Intel i7-6700K,  
ASUS STRIX GTX 950, Samsung Galaxy Note 5



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# Of Tech Conventions And Cool Things

**I**nternationale Funkausstellung Berlin, or IFA Berlin as most people outside of Germany would know it by, is Europe's own CES, and hosts a bevy of brand new products that you may or may not have seen making its way here in Malaysia. We kept a close eye on the products that were on show, and some of our favourites include the new Moto 360, the ASUS GX700 laptop, and not forgetting the Sphero BB-8. Read more on the IFA 2015 in this month's Cover Story.

We've also got more Windows 10 installation tips for you, if you ever find that the Windows 10 upgrade system to be a tad bit complicated for you. There is so much more to discover with regards to the new Microsoft operating system, and it feels we've only scratched the surface (no pun intended) with it so far.

Interested in how the new goal line technology works? We've got a short feature on that, and all that we can say is that it's certainly one very expensive piece of technology. There are actually quite a lot of variants of this piece of tech involved, but it seems only one company gets the nod from multiple football federations. Protip: It's the same one used in the previous World Cup.

NVMe storage technology is making a rapid pace in the consumer tech space, with enthusiasts lapping up the blazing transfer speeds it has to offer. We take a look at some of SSDs that utilise this technology, and show you our findings. Interested to know about AMD's new High Bandwidth Memory technology? As it turns out HBM is in its infancy stages, but with technological advancements around the corner, we'll definitely be seeing more graphics cards and other memory components use this technology as well.

**CHIP Malaysia**



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Bandar Damansara Perdana, Jalan PJU 8/1

47820 Petaling Jaya, Selangor, Malaysia

Tel: (03) 7727 6554 Fax: (03) 7727 3554

#### PRINTED BY

Unipress Printer Sdn. Bhd.

117-G, Jalan Tiaj 1/4, Taman Industri Alam Jaya,

42300 Bandar Punchak Alam,

Selangor Darul Ehsan.

Tel: (03) 6038 5578 Fax: (03) 6038 3944

#### DISTRIBUTED BY

MPH Distributors Sdn. Bhd.

Ground Floor Warehouse, Lot 2, Bangunan TH,

No. 5, Jalana Bersatu, Section 13/4,

46200 Petaling Jaya, Selangor

Tel: (03) 7958 1688 Fax: (03) 7956 5995

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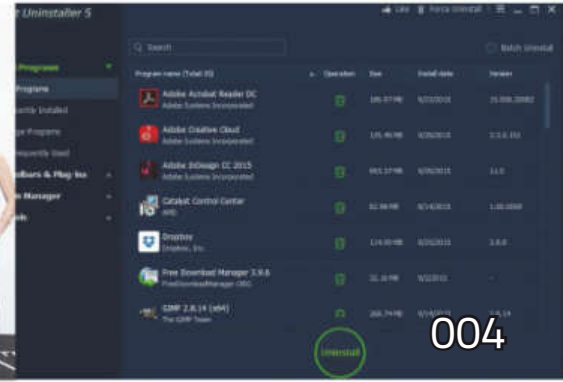
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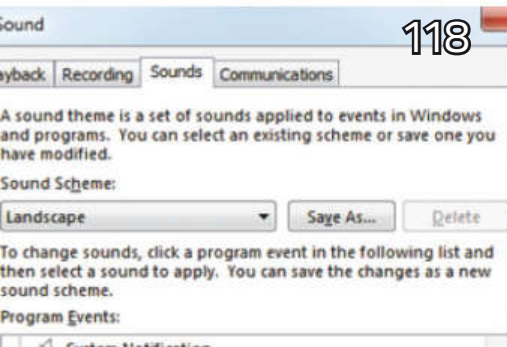
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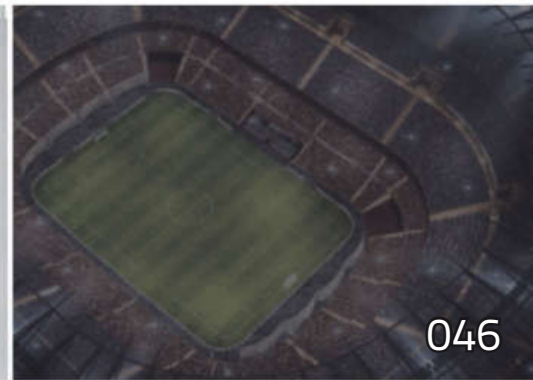


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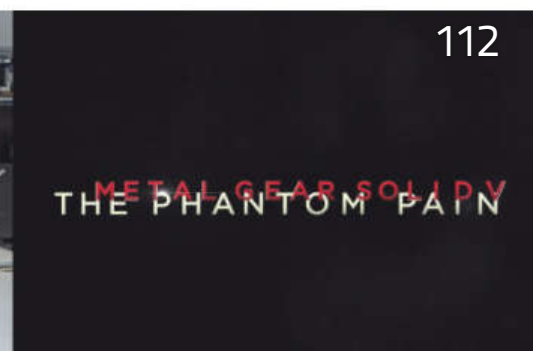
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# CHIP Downloads October 2015

We're back with our monthly dose of interesting, free and handy tools for you to enhance your PC experience. If you want to know how you can get these files, follow the instructions below:

1. Head on our website @ [www.chip.com.my](http://www.chip.com.my) and right at the top, click on the 'Downloads' tab
2. After that, click on the respective month's post. You will then be prompted for a password. The password can be found on this page monthly.
3. Navigate using the tabs and pick the categories you want to download the files from. Once you find the file you want, just click on it and you're good to go!

And it's as easy as that!

**PASSWORD FOR OCTOBER 2015 - supermoon**

## Featured Tools Driver Easy

Driver Easy is a powerful driver updater tool for Windows 7, 8.x, 10, Vista, XP. With a driver database with over 8 million drivers which are always up to date, Driver Easy will search and install the latest drivers so you never have to worry about incorrect or out-of-date drivers. It can identify the unknown devices on your PC and find the proper up-to-date drivers for it in a matter of seconds.



## IOBit Uninstaller

IOBit Uninstaller is a nifty little tool which helps keep your computer organised and clean of unwanted applications or programs. As time goes by your computer will have remnants of old files and registries, which will slow down your computer over time. IOBit allows you to remove these unneeded files in a single click. Or maybe your browser is filled with toolbars and plugins which you've accidentally installed, don't fret for IOBit Uninstaller is also capable of removing those pesky plugins.

## Ultimate Windows Tweaker

Out of the many system tweakers tools out there on the internet, the Ultimate Windows Tweaker stands out the most amongst them. Packing tonnes of different tweaks in a portable, super-lightweight and did we mention? It's complete free for download. Ultimate windows Tweaker allows you customise the look and feel of Windows Explorer, the Start Menu and the taskbar appearance. You can also tweak your welcome screen and User Account settings through the software easily.



## Essentials

Our list of essentials consists of programs and software such as graphic drivers, browsers, compression software and even Cloud storage software that will improve a PC user's experience. The links on our website won't provide you with the files, instead it will lead you to the developers' official website, where you can find the right file for you.



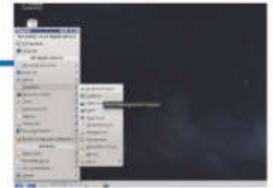


# The Monthly Downloads

## Mageia 5

**Operating system: Linux**

Within the past few years, Ubuntu has made a name for itself as one of the top beginner friendly Linux systems. But with the release of Mageia 5, a derivative of the former Mandriva, Mageia 5 is a worthwhile alternative you can check out if you're looking for something different. Although the software features offered by Mageia are less in comparison with Ubuntu, Mageia provides all the core features needed at a workplace.



## Zeta Producer Home 12.5.6

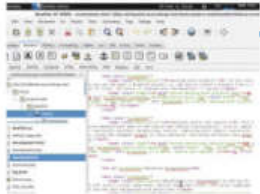
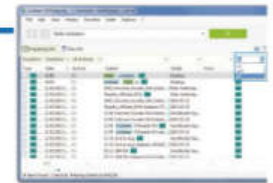
**Operating system: Win Vista / 7 / 8**

Zeta Producer is a testament that even without any HTML knowledge you can still make websites easily and quickly. Zeta Producer comes with a preset of themes, which you can use choose from to start your web designing journey. Building a website could never have been any simpler with Zeta Producer, be it a simple HTML page or an image gallery.

## Lookeen Free 10.0.1.5892

**Operating system: Win XP / Vista / 7 / 8**

Lookeen Free is a freeware that helps you find your files quickly and faster than the integrated Windows search. After installation, you should index your files by clicking on 'Start > Index' so that your search will produce results much more quickly. With an easy to use interface and simple filter options, looking for files in your computer has never been simpler.



## Bluefish 2.2.7

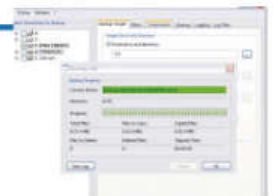
**Operating system: Win XP / Vista / 7 / 8**

Supporting more than 30 programming and scripting languages, Bluefish leaves no stone unturned for the everyday programmers and web developers. Bluefish is an open-source software, made to be lightweight and fast but chock full of functions and features such as predetermined tags that make your work quick and easy.

## Back4Sure 3.7.1

**Operating system: Win XP / Vista / 7 / 8**

This open-source program creates backups of your important data and drives very quickly. The software offers easy to understand and detailed options for beginners as well as advanced users. In addition to the source and target folders, you can also define the compression of the files, and Back4Sure can display it as ZIP files.



## DVDFlick v2 v1.3.0.9

**Operating system: Win XP / Vista / 7 / 8**

Entering its second version, DVDFlick v2 is an enhanced version of its predecessor which is a powerful authoring tool. The latest version is not only faster than the original but also supports modern codecs. Creating DVD's couldn't be made easier than with just a click of a button.

## Kodu Game Lab 1.4.61.0

**Operating system: Win XP / Vista / 7 / 8**

If you want to get an insight into the programming of games on the PC, you can try out Kodu Game Lab. The approach of the software is remarkably easy: instead of generating long codes, you can work in an object-oriented manner. The detailed tutorials at the start of the program help you with your first steps into this world.



## Giada Loop Machine 0.10.0

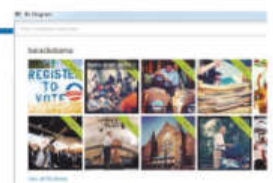
**Operating system: Win XP / Vista / 7 / 8**

Enjoy creating music in your free time, or are you an aspiring musician and DJ? If so, take a look at Giada Loop Machine, a powerful and lightweight hardcore audio tool for DJ's and electronic musicians. With a load of tools and features, getting used to the software is the first thing you will do, but soon after you will be performing like you never did before.

## 4K Stogram 1.9.3

**Operating system: Win XP / Vista / 7 / 8**

Just about anyone with a smartphone would know what is Instagram is. 4K Stogram is a software that helps to download said photos from the app onto your PC. When the program starts, just pick the photos from the account of your choosing, click 'Follow' and watch it work its magic.





Executives from Samsung and its brand ambassadors showing off the new Samsung Galaxy Note 5 and S6 Edge+ to the crowd at the launch event in KL recently

# A Note To Remember

Samsung Malaysia announces availability of Galaxy Note 5 and S6 Edge+ smartphones

It wasn't long ago that Samsung announced its two latest flagship devices, the Samsung Galaxy Note 5 and the Galaxy S6 edge+ in New York. Mere weeks after the big launch, Samsung Malaysia Electronics unveiled the two new smartphones to the masses in Malaysia, representing Samsung's continuous commitment to the large-screen smartphone segment, which Samsung first ventured into in 2011 with the first Samsung Galaxy Note.

Both the Samsung Galaxy Note 5 and the S6 Edge+ feature the same form factor and display size, with the exception of the latter's dual edge screen, which provides easy access to your favourite apps, and an enhanced People edge shortcut for easy communication with your top five contacts.

Featuring a 5.7 inch qHD display, both the Note 5 and S6 edge+ are powered by Samsung's 2.1GHz Exynos 7420 octa-core processor, alongside 4GB of LPDDR4 RAM, with 32GBs of storage space. Interestingly enough, the version of the smartphones that Malaysians will be receiving are the Note 5 and S6 edge+ DUOS versions, which

support dual SIM card operation, perfect for businessmen who often use different numbers for work and personal life.

Both phones also sport similar optics in the form of a 16MP rear-facing camera and a 5MP front-facing camera with an aperture count of f1.9. The rear camera is not only capable of capturing some amazing photos under a variety of lighting conditions, but can also record video in 4K, something that Samsung has also started with the Note 4.

The Note 5 features an all new S Pen that is designed to feel more like an actual pen than a digitiser, offering improved writing capabilities, while packing a number of very useful tools. Samsung has also added a clicking mechanism to ensure that users are less likely to accidentally drop and lose the S Pen when using the phone.

The Air Command now is more practical as the S Pen tools all hover instantly for easy access to its many features, including Scroll capture, which allows you to capture lengthy articles and app screenshots in just a few taps.

Not only that, Samsung has also improved



The Samsung Galaxy Note 5 has a 5.7 inch screen, powered by a Samsung Exynos 7420 octa-core processor, with 4GBs of RAM and 32GBs of storage space



The Samsung Galaxy S6 edge+ meanwhile features similar design and specs to that of the Note 5, but has the edge screen on both sides of the display

upon its wireless charging technology, which allows the Note 5 and S6 edge+ to charge from empty to full in two hours. Wired charging is even faster as the phones can be charged full in 90 minutes flat.

Available starting tomorrow, the Samsung Galaxy Note 5 will be available in Champagne Gold and Pearl White for RM2,699, while the Galaxy S6 edge+ will be available in Champagne Gold and Black Sapphire for RM3,099. Both prices are also inclusive of 6 percent GST.

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Andrew Cheong, Country Director of Sony Mobile Communications

# Sony Mobile Takes Selfies Seriously

Introducing two new phones to the Xperia line, Sony Mobile takes selfies up a notch

Sony Mobile revealed two new devices to their Xperia line of smartphones, the Xperia C5 Ultra Dual and Xperia M5 Dual. Also collaborating with Sony Mobile was 11street and LINE, to give exclusive deals and contests for 11street and LINE users.

The Xperia C5 Ultra is an all new PROselfie smartphone, having 13-megapixel cameras on the front and rear of the phone, which is a first in the industry. And to further enhance the "selfie" experience the front camera has a flash for low-light selfie taking, and is also able to take HDR photos. Sporting a 6-inch FULL HD IPS display, the screen almost touches the sides with a super-thin bezel of 0.8mm, and also features a one-handed mode to minimize windows for easier usage with one hand.

Behind it, the Xperia C5 runs using a 1.7GHz Mediatek 6752 64-bit octa-core processor and 2GB of RAM. With an internal storage of 16GB, expandable up to 200GB through microSD, the Xperia C5 is powered

by a 2930 mAh battery which boasts an extensive battery life.

On the other hand, the Xperia M5 has a 21.5-megapixel rear camera and 13-megapixel front camera, which are also capable of taking HDR photos due to the Exmor RS sensors, and are found in both the C5 and M5. Together with its 0.25-second Hybrid autofocus, you can shoot the moment as it is. The Xperia M5 has a 5-inch FullHD display, using the Mobile BRAVIA Engine 2, giving enhanced sharpness and contrast. The Xperia M5 uses a Mediatek Helio X10 64-bit 2.0GHz octa-core processor and 3GB of RAM. Also having 16GB of internal storage which is expendable up to 200GB. The Xperia M5 has a waterproof design similar to Sony premium smartphones.



Sony Xperia C5 Ultra Dual

The Xperia C5 Ultra Dual is available in Sleek Black, Crisp White, and Cool Mint. And is priced at RM1,399.00. While the Xperia M5 Dual is available in Black, White, or Gold and priced at RM1,599.00.  [www.sonymobile.com/my](http://www.sonymobile.com/my)





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# ZenPad, Luxury In The Palm Of Your Hand

Customisable to your tastes, with so many accessories to enhance your experience

Building on the success of its ZenFone 2 smartphone, ASUS launched the ZenPad C 7.0 and ZenPad 7.0 as new additions to their line of Zen products.

Designed to appeal to the modern crowd, the ZenPad C 7.0 and 7.0 are fully customisable, and comes with Android 5.0 Lollipop. The ZenPad 7.0 embodies luxury with its 7-inch IPS Panel, and ASUS' Tru2Life technology. The ZenPad 7.0 delivers amazingly realistic images with accurate contrast, sharpness and detail. Tru2Life makes it possible by boosting dynamic range, measuring the contrast between the lightest and darkest points of an image, providing wider contrast levels for incredible realism.

Both ZenPads also come with DTS-HD speakers, making them the first tablets to ever feature DTS-HD Premium Sound which delivers a louder audio experience, with deeper bass, immersive surround sound, and fully configurable to your listening preferences.

DTS-HD is also available on the earphones and headphones, offering a theatre-quality sound with its 5.1-channel virtual surround sound.

The ZenPad C 7.0 is powered by an Intel Atom x3-C3230 quad-core, 64-bit processor and 1GB of memory, with an internal storage of 16GB which is expandable up to 64GB. The ZenPad 7.0 meanwhile has an Intel Atom x3-C3230RK quad-core 64-bit processor together with 2GB of memory and 16GB of internal storage which is also expandable. The ZenPad C has a 2-megapixel rear camera and 0.3-megapixel front camera while the ZenPad 7.0 has an 8-megapixel rear camera and 2-megapixel front-facing camera.

The ZenPads' other selling point is that it can be customised with accessories, such as the Audio Cover, a cover that has 6 speakers and can be used as a convenient stand for watching videos, and is able to last up to 6 hours of continuous usage on a single charge, boasting 6 times sound volume. The Zen

Clutch, on the other hand is a premium stylish case which offers basic protection and comes in a variety of colours. There's also the Zen Case, the leather patterned back case which is interchangeable with 5 different colours. Finally, the Power Case which hooks on to the ZenPad provides up to an additional 16 hours of battery life, while not compromising its slim and elegant design.

The ZenPad C 7.0 is available for a retail price of RM499 in Black, White, Red, and Aurora Metallic. The ZenPad 7.0 meanwhile is available for RM749 in Black, White, and Aurora Metallic.



[www.asus.com/my](http://www.asus.com/my)



The ZenPad 7.0 meanwhile is available for RM749 in Black, White, and Aurora Metallic



The ZenPad C 7.0 is available for a retail price of RM499 in Black, White, Red, and Aurora Metallic



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# A Brand New ATM Experience Coming To A Bank Near You

## NCR Introduces Secure, Game-changing Cloud-based ATM Software Platform

The Automated Teller Machine, or ATMs, as we know them by these days, have been around for roughly around 50 years. For a machine that houses a very important function in our daily lives, the ATM has not seen a significant upgrade in technology for a very long time. NCR, a big name in consumer transaction technologies aims to change all that with its new cloud-based ATM software platform, Kalpana.

According to Danny Fong, Country Manager of NCR Malaysia, banks are reluctant to upgrade ATMs due to the high cost of purchase and maintenance of these machines, and are content to keep using old machines as long as they work, and are secure enough for users to make their daily transactions with.

Kalpana is a cloud-based ATM software


that is loaded into a HTML5-standard page, not much different to that of a web app that is loaded on a phone or a computer. NCR's new thin-client ATM includes an Android operating system, and is designed to eliminate malware and enable rapid deployment of new devices and ATM services, to reduce costs by up to 40 percent, whilst improving customer experience.

With Kalpana, NCR aims to improve ATM deployment agility, bringing their new machines to the market twice as fast as before, whilst significantly reducing the cost of deployment, power management, security updates and support for dispute resolution.

NCR's new thin-client ATM, named the NCR Cx110 ATM runs on a modified version of the Android operating system that has its BIOS removed, essentially plugging backdoors

that could possibly infect the clients. The Cx110 ATM's biggest draw, however has to be that it requires minimal client software to run, as a majority of the machine's software stack is managed by NCR themselves.

The Cx110 also has features such as a card shutter, webcams at the top and on the money dispensing slot, as well as a fingerprint scanner and an NFC scanner for cardless operation, if banks decide to implement them in the near future.

With this new approach, banks will be able to reduce the cost of operating ATMs by allowing software maintenance and upgrades to be controlled in a centralized location and providing secure automatic updates, avoiding costly visits to each ATM. 

[www.ncr.com](http://www.ncr.com)



Danny Fong, Country Manager of NCR Malaysia explaining the features of Kalpana and the company's new thin-client ATMs



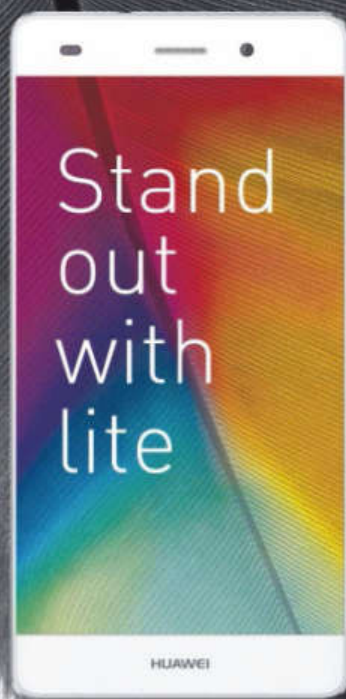
Matthew Heap, Director, Solution Management, AMEA Region, NCR and Neill Harris, Global Marketing Director, ATM Solutions, NCR at the launch of NCR's new Android-based ATM machine



The NCR Cx110 ATM features a web-based interface, with a majority of the software stack on NCR's end, allowing banks to reduce cost in terms of software maintenance and upgrades



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Mr. Goh Yin Hwang, Country Manager of Malaysia Office(left) and Ms. Chiharu Asai, Managing Director of OKI Data (S) Pte Ltd launching the brand new OKI printers

# OKI Hosts Their OKI Golf Tournament 2015 @ The Els Club

OKI launches new line of printers during their friendly golf tournament

OKI DATA (S) Pte Ltd – Malaysia Rep Office recently hosted the OKI Golf Tournament 2015 at World's Best New Golf Course, The Els Club, Teluk Datai, Langkawi with 72 golfers in attendance.

"Theoretically, it is known as a golf tournament, but more so, it is a friendly and interactive get-together exclusively for our customers, partners and media members", says Mr. Goh Yin Hwang, Country Manager of OKI Data (S) Pte Ltd – Malaysia Rep Office.

OKI first held their golf event in 2011 at The Mines Resort & Golf Club which was well received by its customers and partners.


Following the great response, OKI hosted the OKI Golf Tournament 2013 two years later at Palm Garden Golf club, IOI Resort City Putrajaya, with over 100 golfers comprising of clients, partners and media entering the fray. This year however, a representative from OKI Data, Ms Chiharu Asai, Managing Director of OKI Data (Singapore) Pte Ltd, also joined the game.

In addition to the golf tournament, OKI also took the chance to launch their new high-performance, eco-friendly, A4 Mono Printers and Multifunctional Printers by refreshing its portfolio with the B412dn, B432dn and B512dn single-function printers and the MB472dnw



Grand Prize presentation of a brand new 60-inch LED TV to Mohd Fairuze Mohd Fadzil became a highlight of the event

and MB492dn multifunctional printers. These new printers offer businesses of any size the choice and flexibility to suit their needs and budget.

On top of that, they also launched their new colour A3 smart multifunctional printer (MFP) ES8473, with intelligent, user-friendly features and enhanced functionality. This powerful, smart MFP provides additional levels of business productivity through the sXP1 (Smart Extendable Platform). OKI's embedded platform that offers an enhanced workflow integration and document management across the user's business. 

[www.okiprintingsolutions.com](http://www.okiprintingsolutions.com)



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# Game On With Skylake

ILLEGear is ramping up their laptops with the latest Skylake processors providing better performance and energy saving



*The ILLEGear D7 will come with a 17.3-inch Anti-glare Display IPS Wide Colour & Viewing and will support NVIDIA's G-SYNC*

ILLEGear is set to release its latest models built with the latest 6th-generation Skylake Intel Core processors during Q4 of 2015. The Skylake processors will deliver better cooling, improved CPU performance and greater battery life compared to 4th-generation Haswell processors. Moreover, Skylake supports DDR4 RAM that yields lower voltage, resulting in greater power savings and improved performance.

Estimated to be released in September & October are ILLEGear's D7 and D5 laptops. The D5 will feature a 15.6-inch FULL HD IPS Display but can be configured up to a 15.6-inch 4K QFHD Display and is G-Sync capable. It will also come with either a NVIDIA

GeForce GTX970M 6GB or GTX980M 8GB GDDR5 depending on which configuration you chose. Also available are memory configurations of up to 32GB Dual-channel DDR4 SDRAM at 2133MHz.

For audio and video applications, the D5 features a pair of 2 Watt Onkyo Speakers which will fulfil your multimedia needs. It will also come with two M.2 SSD slots, and an 8-cell battery, for a speedy startup and long-lasting battery life. Keeping all these powerful components cool are seven interconnected-heatpipes with dual-vent and dual-fan cooling. For video conversations or VOIP there is a built-in HD webcam and microphone that should work well enough for the purpose.

The ILLEGear D7 will come with a 17.3-inch Anti-glare Display IPS Wide Colour & Viewing and is G-Sync capable. The laptop will also feature the Z170 chipset, i7 Skylake Desktop Processor, NVIDIA GeForce GTX 970M/980M and up to 32GB DDR4 SDRAM at 2133MHz like the ILLEGear D5. With many of its features very similar to the D5 the D7 brings powerful performance but with a bigger screen. Both the ILLEGear D5 & D7 are scheduled to be available between September and October 2015. 🇲🇾

[www.illegear.com](http://www.illegear.com)

# Revolutionising Klang Valley's Grocery Shopping Experience

HappyFresh is set to revolutionise online grocery shopping, dedicated to being on time and choosing only the best products

HappyFresh is an app that allows customers to order groceries from local supermarkets and specialty stores.

Available in Malaysia since March this year, it is dedicated to transforming the online grocery shopping scene, and aims to do whatever it takes to deliver groceries to your door step in little as one hour.

Managing Director of HappyFresh Malaysia, Opal Wu says 'Online shopping is fast gaining traction and is a huge trend these days. There are many online shopping apps available in the market, however, most of them do not offer same-day delivery. At HappyFresh, our promise

is not just to get your groceries to you on the same day, if you like to we will have it delivered to your doorstep in as little as one hour.'

Using professionally-trained personal shoppers stationed at each supermarket, HappyFresh ensures only the freshest and highest quality items are selected, and delivered with large orders being delivered either by multiple drivers on motorcycles or cars and taxis. In the event an item is unavailable or out of stock, HappyFresh shoppers will contact the customer to suggest replacements or to cancel items. Once delivered, customers will be able to pay by credit card, debit card, cash and



*Opal Wu, Managing Director of HappyFresh Malaysia (right) together with a HappyFresh delivery driver*

HappyFresh will also offer free returns at the door for customers that are unsatisfied with any item that were picked.

Each HappyFresh personal shopper is professionally trained to pick only the ripest and freshest produce and items, not to mention undergoing background checks to build trust and to ensure the safety of each HappyFresh customer. HappyFresh currently has over 90 shoppers and drivers spread out across Kuala Lumpur and Klang Valley, mainly in Puchong, Petaling Jaya and is collaborating with 9 partner stores on the platform and is looking for 100% coverage in the Klang Valley area in the near future. 🇲🇾 [www.happyfresh.com](http://www.happyfresh.com)



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ROG SWIFT PG278Q

No. 1 Gaming Monitor Brand

STRIX GTX 980 Ti  
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## Get Ready For A Flawless Gaming Experience

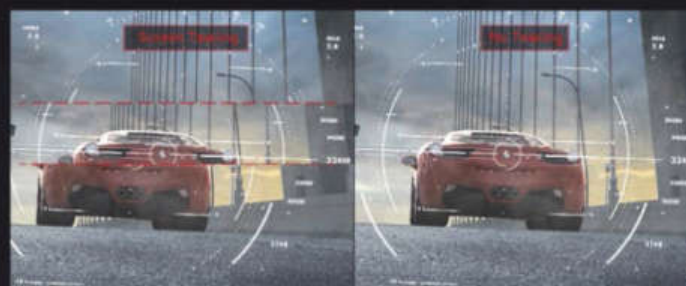
A common issue when it comes to gaming even with the best of components is graphic lag and tearing. Sometimes the monitor has a difficulty keeping up with the graphics card's output, and other times, the graphics card will have a hard time syncing with the monitor. All this is about to change with ASUS' awesome combo of the ASUS STRIX GTX 980 Ti graphics card and the ASUS ROG SWIFT PG278Q G-Sync monitor.

### ASUS STRIX GTX 980 Ti

The ASUS STRIX GTX 980 Ti is based on NVIDIA's most powerful Maxwell GPU, with a number of tweaks to improve its performance and temperature levels. ASUS has slapped on its latest Direct CU III cooler onto the 980 Ti, lowering its operating temperatures, whilst factory-overclocking the core to a higher level than that of the reference card's basic clock numbers. With an intuitive new UI, the new GPU Tweak II also makes overclocking easier than ever, and features Gaming Booster to maximize graphics performance. As with all of NVIDIA's GTX 9xx series cards, the ASUS STRIX GTX 980 Ti supports NVIDIA G-Sync, NVIDIA's own gaming display technology which combines the power of both the GPU and the monitor.

### ASUS ROG SWIFT PG278Q

Accompanying the GTX 980 Ti GPU is ASUS' own G-Sync monitor, the ASUS ROG SWIFT PG278Q. This 27 inch display features a resolution display of a whopping 2,560x1,440 pixels that makes your games appear to be larger than life. Experience refresh rates of up to 144Hz for the smoothest possible gameplay, even in graphics-intensive fast-paced action sequences, and rapid 1ms response time that eliminates smearing, tearing, and motion blur, so you can react instantly to what's onscreen.



WITHOUT STRIX GTX 980 Ti &  
ROG SWIFT PG278Q

WITH STRIX GTX 980 Ti &  
ROG SWIFT PG278Q

### NVIDIA G-Sync Technology

The ASUS ROG SWIFT PG278Q monitor features a G-Sync panel inside the back of the display panel which helps synchronise the refresh rate of your monitor to the frames that are being pushed out by the ASUS STRIX GTX 980 Ti. By doing this, you will eliminate screen tears and minimise display stutter, and even improve input lag. In-game scenes appear perfectly as soon as they are rendered, and the faster framerate afforded by the display also ensures super-smooth gameplay, providing you with an unbeatable competitive edge.

# Google Malaysia Announces Street View Imagery of Peninsular Malaysia's Coastline

View Peninsular Malaysia's coastline from the comfort of home

A major update to Google Maps in Malaysia was announced recently as Street View imagery of Peninsular Malaysia's coastal regions are made available to see for both Malaysians and people from around the world.

This follows the completion of the "Paddle For Nature" project, a collaboration between the Malaysian Nature Society (MNS) and Google Malaysia, which is a kayak expedition whose

aim is to collect visual imagery of Peninsular Malaysia's coastline as well as a means to serve as a fundraising campaign for the non-profit organization.

The event originally started in Kelantan in September 2014, where a team of kayakers from the Malaysian Nature Society paddled over 2,200KM through the peninsular coastline, eventually completing the expedition in Kuala Perlis in March this year.



The StreetView Kayak that was used to capture images of Peninsular Malaysia's coastline

"This is literally the first of its kind in the world for Street View. Now, Google Maps users can circumnavigate virtually from Tumpat to Langkawi and retrace the path of the kayak which set off from Kelantan, and ended in Kuala Perlis." Said Sajith Sivanandan, Managing Director of Google Malaysia, Vietnam, Philippines and New Emerging Markets.

On top of circumnavigating the shores of Peninsular Malaysia, the kayak expedition team also travelled to Kukup Island in Pontian and coastal areas from Georgetown to the Penang State Park, including some stretches of the main island of Langkawi and its surrounding locations. [www.google.com.my](http://www.google.com.my)

## HP FanFest 2015 @ The Laundry Bar

Thanking fans and followers of their brand, HP rewards their loyal followers with an exclusive hands-on experience and a night of entertainment!

HP celebrated together with their fans and followers during an exciting night at The Laundry Bar. To reward their loyal fans and followers, they gave an exclusive hands-on experience of their latest products, ranging from all-in-one desktops to their latest detachable tablet notebook Pavilion x2, and the ultra-thin convertible Spectre x360.

The event started off with a quick brief on the price and specifications of the HP Pavilion x2 and HP Spectre x360. The Spectre x360 is a convertible notebook, capable of bending a full 360 degrees, made possible using innovative hinges that contain a set of three spiral gears which keep it synchronised and precise, while

also featuring a full-sized 1.5mm travel keyboard.

Available in three different configurations, the Spectre x360 is powered by a choice of either Intel Core i5 or i7 processors, as well as SSD's ranging from 128GB to 512GB. It supports both HDMI and DisplayPort 1.2, and has three USB 3.0 ports with HP USB Sleep and Charge. The Spectre x360 is available in the following configurations: Intel Core i5, Full HD touchscreen display, 8GB RAM and 128GB SSD for RM3,999.00, Intel Core i7, Full HD touchscreen display, 8GB RAM and 256GB SSD for RM4,999.00, and Intel Core i7, Quad HD touchscreen display, 8GB RAM and 512GB SSD for RM5,999.00.



James Low, Consumer Notebook Marketing Development Manager of HP Malaysia demonstrating the detachable capabilities of the HP Pavilion x2

The HP Pavilion x2 on the other hand sports a quad-core Intel Atom processor and has an internal storage of 64GB which is expandable through its microSD card reader. It also comes with a fully detachable 10.1-inch diagonal HD IPS touchscreen display. The Pavilion x2 also boasts up to 10.45 hours of battery life while playing HD videos. The Pavilion x2 is available starting at RM 1,299.00. [www.8.hp.com/my](http://www.8.hp.com/my)





MSI Z170 GAMING MOTHERBOARDS  
CHOOSE  
YOUR DESTINY



# Game Your Way With MSI's Z170 Series Motherboards

Thanks to Intel's new 14nm Skylake processor, MSI has been able to take a shot at creating motherboards aimed at a variety of consumer and enthusiast levels. With the introduction of the Enthusiast, Performance and Arsenal Gaming motherboards, no one is left behind anymore.

## Enthusiast Gaming

MSI's Enthusiast Gaming line of motherboards offer features that experienced overclockers and gaming enthusiasts will absolutely appreciate. Overclocking is made easy with the OC Dashboard and Game Boost, which immediately cranks your PC's performance numbers up to 11 with just a single click. For audio enthusiasts, MSI has upgraded its Audio Boost hardware to include a variety of new audio components, as well as introduce Nahimic's audio software to boost the audio and voice performance of your PC, turning it into an advantage whenever you're playing games such as Call of Duty or Battlefield online with other players.



OC  
DASHBOARD

GAME  
BOOST

AUDIO  
BOOST

Z170A XPOWER GAMING  
TITANIUM EDITION

## Performance Gaming

The Performance Gaming line of motherboard meanwhile is geared more towards gaming enthusiasts who are also into modding cases, motherboards and other components. Motherboards in this range come with plenty of design and modding choices, chief of which include the Mystic Light lighting feature, which allows you to change your motherboard's RGB lighting to a variety of colours via the MSI Gaming App. Not only that, motherboards in this range also come equipped with USB 3.1, which provides you with transfer speeds of up to 10Gbps, which is twice as fast as the previous



Z170A GAMING PRO

MYSTIC  
LIGHT

TURBO  
M.2

USB 3.1

## Arsenal Gaming

Are you looking to upgrade your PC, but are on a budget? Fret not as MSI has its Arsenal Gaming line of motherboards just for you. Whilst motherboards in this line, including the Grenade, Mortar, Bazooka and Tomahawk motherboards are catered for casual gamers, with features that enhance their gameplay experience. Arsenal Gaming motherboards come with ambient lighting on the board itself, making the insides of your PC look cool and stylish. Via the MSI Gaming App, you will also be able to set macro keys on both your keyboard and your mouse, to ensure a smoother, faster and more accurate gaming experience.



GAMING  
LAN

AUDIO  
BOOST

Z170A TOMAHAWK

# Digi Provides Direct Billing For iflix

Digi now allows its customers to directly bill their iflix monthly subscription plan to their prepaid or postpaid account

**D**igi Telecommunication Sdn Bhd announced a partnership with iflix, Malaysia's own video-on-demand streaming service to provide direct billing of iflix's services to Digi customers.

Digi customers are able to charge their iflix subscriptions to their postpaid or prepaid Digi accounts through integrated mobile carrier billing. Additionally, Digi customers will receive a 60-day complimentary access to iflix where they can stream on Digi's high-speed 4G LTE and 3G network. As added value, customers who subscribe to an iflix monthly subscription plan after the 60-day complimentary access, will get an extra 1GB of internet data quota to stream iflix on

Digi's network at no extra cost. Digi customers may subscribe to this service by visiting [digi.iflix.com](http://digi.iflix.com)

Christian Thrane, Digi's Chief Marketing Officer, said: "As a movie buff who also enjoys my TV, I am certain that many fans have been crying out for a service like this for a long time. iflix's high quality, on-demand video streaming can be enjoyed conveniently on any mobile device while on the go, which is great for those looking to take a break from a long day or during their commute. We are excited to partner with iflix to bring this service to all our customers."

Azran Osman-Rani, iflix Group COO and



Christian Thrane, Digi's Marketing Officer (left), Azran Osman-Rani, iflix Group COO and CEO of iflix Malaysia

CEO of iflix Malaysia, commented: "iflix is committed to providing a world class service that allows Malaysians to access the world's best TV shows and movies whenever, wherever. Our partnership with Digi allows us to further deliver on this commitment by bringing together two companies with a common vision, and a focus on innovative initiatives designed to create awesome experiences for Malaysians on their mobile devices." 

[www.iflix.my](http://www.iflix.my)

# LEAGOO Launches The Elite 1

LEAGOO Elite 1 packs power and elegance into an elegant and stylish design but at affordable prices

**L**EAGOO Malaysia has unveiled their latest flagship smartphone the Elite 1, designed to look and feel more premium than other flagship smartphones has to offer. A sturdy and powerful device aimed to provide users with a wonderful experience while using it, the Elite 1 has 4G LTE connectivity and is designed with consumers in mind to provide a powerful device at an affordable price.

LEAGOO strives to develop more stylish and affordable products with the latest technology and aims to become one of the top 5 smartphone brands in Malaysia by the end of the year 2016. The Elite 1 is built to be elegant and is housed within a high quality stainless steel chassis surrounding its side, with a CD Grain Design glass finish on its back. A 5-inch IPS display gives a great viewing experience at angles from all sides and is protected by third


generation Corning Glass covering the device from front to back.

The Elite 1 is equipped with a 64-bit octa-core processor clocked at 1.3GHz and 3GB of RAM that boosts performance by 200% and reduces battery consumption by 30%. Packing a hefty storage of 32GB and expandable storage by MicroSD of up to 64GB, space is no issue. It is also powered by a 2,400mAh battery and is dual-SIM (nano-SIM) ready with DUAL 4G Standby.

For photo junkies out there, the phone features a 16MP fourth-generation BSI stacked camera, with a large f/2.0 aperture, offering a near SLR camera photo taking experience. Sitting next to the camera is a dual-LED flash that promises a vivid and colourful imaging even in low light conditions. Selfie-addicts are not left out with the 13MP front camera



combined with a LED flash right next to it for an awesome selfie experience, even in low light conditions.

Priced at RM999.00 inclusive of GST, the Elite 1 is available for purchase now from authorised stores nationwide, and comes in three different attractive colours from Mysterious Black, Pure White to Glistening Gold. 

[www.leagoo.com.my](http://www.leagoo.com.my)



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# Ubisoft Lands Itself Into The Heart Of KL

Ubisoft and RGS join hands to build a theme park first of its kind, blending digital and interactivity for family fun entertainment

Ubisoft announced together with RGS that they are developing a next-generation theme park, which is also the first Ubisoft theme park in the world. First of its kind, they plan to build a theme park where every guest is a player within a game. The moment you step into the park, you are part of a game where every action you do, may or may not score you points.

Hinted as well were "missions" of sorts where attractions may have clues that will lead you to other attractions therefore making rides more interactive. The project is led by Ubisoft Motion Pictures, who has a successful track record of expanding Ubisoft's game brands to theme parks with the launch of the award-winning Rabbids Dark Ride at French park Futuroscope.

Planned to be 10,000 square meter in

size, it is going to be an indoor theme park with innovative rides and attractions using the latest technology. Located in the heart of Kuala Lumpur, the actual location has not been disclosed as of yet but Malaysia has been chosen, being the second most visited country in Asia based on 2014 Tourism Highlights Report by the World Tourism Organization.

Jean de Rivières, Senior Vice President and Associate Producer, Ubisoft Motion Pictures said "Together we are creating a place where every guest is a player, every ride is a playground, and every visit is a game." and "In RSG, we've found a partner with a successful track record in working with international brands, a shared ambition to design the family destination of the future, and a wealth of expertise in theme



Ramelle Ramli, Chairman, RSG(left) and Jean de Rivières, Senior Vice President, Ubisoft Motion Pictures

park development."

Each attraction will be inspired by Ubisoft's biggest titles and franchises such as Assassin's Creed, Just Dance, and Rabbids. Construction is planned to begin at the end of 2016 or early 2017 and opened in 2020. 🇲🇾

[www.ubisoft.com](http://www.ubisoft.com)

[www.rsg-group.com.my](http://www.rsg-group.com.my)

# Digi Introduces Carrier Billing With Google

Buying Android apps just got easier thanks to Digi

Digi Telecommunications has announced a partnership with Google to enable the telco's customers to directly bill all purchases on the Google Play Store and various other Google services right to their monthly Digi bill, eliminating the hassle of needing a credit or debit card to validate purchases.

According to the Visa Consumer Payments Attitudes Study, 52 percent of Malaysians are very cautious with online payments through credit cards, with a majority of them only going online to browse for products that they have an interest in purchasing.

This, coupled with Bank Negara's Financial Stability and Payment Systems Report in 2014 that states that there were only 8.2 million

active credit cards, for a projected population of 30.3 million, which translates to about 13 percent of the population, assuming that each person who uses credit cards uses 2 cards at any time.

"As the first telco in Malaysia to offer direct billing of purchases from Google Play Store to our customers, we're signaling our intention to lead the way in enabling internet services that enrich our customers' experience online. Our aim is to be the best mobile internet provider for the mass market, and continue to introduce services like direct billing for Google Play, which will add value to our customers" said Christian Thrane, Digi's Chief Marketing Officer.

At the event, Google Malaysia Industry



Christian Thrane, Chief Marketing Officer of Digi Telecommunications introducing the new carrier billing partnership with Google

Head, Prashant Pathmanaban also announced the availability of Google Play Newsstand, which brings together over 2,000 different digital news and magazine sources, both free and paid.

In order to use Digi's carrier billing service, simply click the drop down menu in the purchase window to change the billing option from credit or debit card to Digi's carrier billing. The bill will then be reflected in the invoice of your phone bill for that particular month. 🇲🇾

[www.digi.com.my](http://www.digi.com.my)



# Consolidating Regional ICT Advancements

## PIKOM to host regional IT Summit

With the imminent implementation of the ASEAN Economic Community (AEC) by end 2015, this year's Asian-Oceanian Computing Industry Organization (ASOCIO) PIKOM ICT Leadership Summit 2015 addresses the challenge of how the ICT sector should play a more active role in AEC's overarching objective of transforming the ASEAN region into a 'single production and market base' for the world, which will in turn spillover to offer tremendous opportunities for the local ICT industry.

Hosted by PIKOM, the ASOCIO PIKOM ICT Leadership Summit 2015 is a C-level thought leadership event that is specially designed to cover the highest leadership trends and insights with the intent to spur innovation and adoption of new technologies and business

models to drive ICT growth in the region. Themed "Reinventing Leadership in the Digital Age", 2015's summit will be held in conjunction with several other keynote events, notably the MSC Malaysia APICTA Awards ceremony and gala night.

ASOCIO PIKOM ICT Leadership Summit 2015 is expected to see participation from over 500 C-Level executives and government officials from 24 Asian and Oceanian economies. Key speakers who have confirmed for the event include Tan Sri Dr Lin See Yan (former Deputy Governor of Bank Negara), Tan Sri Munir Majid (Asean Business Advisory Council – Malaysia chairman), Goh Peng Ooi (founder of Silverlake), Ivan Teh (founder of Fusionex) and Fredrik Haren, author of the Ideas Book.



Stan Singh, C.S. Chin, Cheah & Eric Wong Announcing the ASOCIO PIKOM ICT Leadership Summit

ASEAN ICT Masterplan includes six strategic thrusts: Economic Transformation; Engagement and Empowerment; Innovation; Infrastructure Development; Human Capital Development and Bridging the Digital Divide. The Summit will delve into details on the specific opportunities and challenges of the masterplan and in line with the theme of the conference.

Also on the agenda are expected further discussions on the impact of taxation on the ICT industry i.e. e-business, standardisation of systems and processes as well as mutual recognition arrangements and agreements across the region. [www.pikom.org.my](http://www.pikom.org.my)

# Become A LEGO Ninja

## LEGO brings popular Lego Ninjago to fans in Malaysia

Fans of the LEGO Ninjago series will be delighted to know that LEGO Malaysia has brought the line of LEGO toys here to Malaysia. In a collaboration with The Curve shopping mall, attendees had the chance to enter the world of Ninjago, participate in some fun family activities and fight alongside Kai, Zane, Cole and Jay against the evil Morro at the LEGO Ninjago Battle Dojo.

Held from 16th of September, visitors of the Lego Ninjago event got to explore five different areas, Build, Hiraki Lake, Calligraphy, Wisdom Path and Airjitzu Battle Zones, all the while honing their skills performing various activities such as building Ninjago robots, LEGO calligraphy, going through a mini maze and Airjitsu flyer battles.

Speaking at the event, Dick Yoong, Country Manager of LEGO Malaysia said, "At LEGO, we strive to provide creative offerings that enrich consumers and fans of all ages, by stimulating their imagination and igniting their ideation. The LEGO Ninjago range particularly fosters imaginative play and allows children to construct their own Ninjago dream world. It also instils positive values in children such as discipline, integrity, perseverance, courage and strength. One of many, we look forward to bringing more of such fun and educative experiences for our Malaysian consumers in the future as well".

Some of the LEGO Ninjago sets on offer include the Final Flight of Destiny's Bounty,



Kevin Hagino, Senior Regional Brand Manager, Sensei Wu, Kai and Dick Yoong, Country Manager of LEGO Malaysia

the Ninjago Titan Mech Battle, the Morro Dragon, and the Ronin REX. The latest collection in the set, the Temple of Airjitzu also made its appearance at the event at The Curve.

Priced from RM39.90 onwards, the new LEGO Ninjago collections are available at all LEGO Certified Stores, LEGOLAND Malaysia Resort and selected distributors / retail outlets including Hamleys and Toys "R" Us.

[www.lego.com](http://www.lego.com)



Zhu Yong Gang, Director of E-Commerce South Pacific, Huawei Technologies(left from centre), Abraham Liu, CEO of Huawei Technologies Malaysia(centre), and Allen An, Director of E-Commerce, Consumer Business Group, Huawei Technologies Malaysia(right from centre) posing with Brand Ambassadors

# Huawei Launches Their Unfair Advantage

Huawei is back again with a cutting-edge edge device with a price you just can't believe

**H**uawei today launched its latest flagship smartphone device in the form of the honor 7 at The Bee, Publika, Solaris Dutamas today. Brandishing their slogan "Your unfair advantage" the honor 7 is set to give you your money's worth, competing with other flagship models at a very competitive price. Equipped with a host of innovative smart functions and multimedia capabilities the honor 7 will help Malaysians excel in life.

The phone has a fully metallic body and is air-brushed with a ceramic coating, exuding a premium feel. But with a full metallic body comes signal interference which Huawei has addressed with their dual-antenna design, placing one antenna on the top and another at the bottom of the phone to ensure strong connectivity. The honor 7 is also ergonomically designed for single-handed use with its 5.2-inch casing and carefully positioned buttons and sensors provides a never seen before ergonomic single-handed operation.

Also getting an upgrade is honor's fingerprint reader, currently in its second

iteration, which allows rapid 360-degree fingerprint authentication from various angles. Boasting one of the fastest unlocking speeds of 0.5 seconds, the honor 7's fingerprint reader also features a self-learning capability that allows scanning accuracy to be enhanced through subtle re-recording of registered fingerprints during use.

Powered by the ever-intelligent HiSilicon octa-core Kirin 935 processor with 3GB RAM and 16GB of storage space, the honor 7 has much to offer, providing consistently smooth performance. Its L-shaped circuit board also allows better cooling of up to 40% when playing games. Together with its long-lasting 3,100mAh battery, the phone will offer exceptional standby and use times as well as reverse and quick charging capabilities.

For those who enjoy photography, the honor 7 sports a 20MP f/2.0 aperture camera that is powered by Sony's IMX 230 sensor and honor's PDAF fast-focusing technology that allows the capture of vivid low-light condition images. For those who love their selfies, the phone will come with an 8MP




The honor 7 is ergonomically designed for single-handed use with its 5.2-inch casing and carefully positioned buttons



The honor 7 in Fantasy Silver powered by the HiSilicon Kirin 935 processor with 3GB of RAM

front-facing camera that offers a wide-angle f/2.4 aperture lens, with built-in LED flash and combined with the honor 7's image enhancement capabilities and panorama feature, make it the perfect selfie and groupie tool.

For added convenience, the honor 7 features more voice capabilities than its predecessor and easier taking of screenshots just by tapping the screen twice with your knuckles. The honor 7 is available for pre-order now at Vmall.my and will come in two colours, Mystery Gray and Fantasy silver at RM1,399. 

[www.vmall.my](http://www.vmall.my)





*Khoo Hung Chuan, Country General Manager, Lenovo Malaysia and Kenneth Low, Marketing & PR Manager, Lenovo Malaysia*

# A PHABulous Offering

Lenovo unveils its PHAB Plus phablet in Malaysian markets

Large-sized smartphones, or phablets, as they are more commonly called, are the in-thing these days. Lenovo, sensing a yet untapped market for affordable, yet powerful phablets, recently announced the Lenovo PHAB Plus at IFA in Germany recently, and just as quickly brought it to Malaysia.

As its name suggests, the Lenovo PHAB Plus sports a large 6.8 inch display, with a resolution of 1,920x1,080 pixels, powered by a 1.5GHz Qualcomm Snapdragon 615 quad-core processor, 2GBs of RAM and 32GBs of storage space, which is expandable via microSD.

"With today's tech-savvy millennial generation in mind, Lenovo is addressing the popularity of larger-screen personal devices, while acknowledging the portability struggles associated with tablet computers. The new Lenovo PHAB Plus conquers these boundaries, merging the fun of a tablet with the portability of a smartphone in a stylish

metallic uni-body casing." Said Khoo Hung Chuan, Country General Manager, Lenovo Malaysia.

As a smartphone, the Lenovo PHAB Plus addresses consumers' 24/7 connectivity needs with its Dual SIM and 4G LTE fast connectivity, ensuring a reliable and fast connection whether at home or abroad. These features are all built upon an Android 5.0 operating system foundation, providing enhanced performance for seamless networking.

The Lenovo PHAB Plus features a 13 MP rear and 5 MP front cameras that ensure crisp images regardless of the settings you use. The Panorama Selfie function and dual-LED flash help users take photos with more natural colour and lifelike skin tones, perfect for sharing selfies, while the Low Light settings enable bright pictures to be taken even in dimly lit environments. Corporate users will also enjoy the Smart Tool, which enables a photo of a presentation slide to be



*The Lenovo PHAB Plus features a 6.8 inch display, powered by a 1.5GHz Qualcomm Snapdragon 615 processor, 2GBs of RAM and 32GBs of storage, running Android 5.0*



*It also has an excellent 13MP rear camera that takes some pretty great shots regardless of the lighting condition*

taken from any angle, and then adjusted and aligned for best results.

A 3,500mAh battery powers the PHAB Plus, lending up to 24 hours of talk time and 20 days of standby time, courtesy of a built-in platform that limits the internal temperature of the device. Both left and right hand users will also find the PHAB Plus easy to use as the phablet has been optimized for one-hand usability, making it more comfortable to hold and use the phablet. Users can double-tap to turn their screen on, long-press anywhere on the screen to take a photo, shake to lock, create a one-hand keyboard that shrinks and snaps to their hand position, and even answer calls through a series of voice-activated prompts.

The Lenovo PHAB Plus is now available at all Lenovo Exclusive Stores and Lenovo Authorised Retailer at RM1,199. [www.lenovo.com/my/en](http://www.lenovo.com/my/en)



Sony's sleek h.ear™1 series are available in deep shades ranging from viridian blue, cinnabar red, charcoal black, lime yellow to bordeaux pink for every type of personality



"h.ear in NC" features a state of the art dual noise sensor technology and Automatic AI Noise Cancelling which filters out unwanted noise for up to 16 hours

# Sony Styles Up their Sound

When headphones don't have to be a fashion disaster

Sony aims to reignite the fire in its audio line-up with its new range of personal audio products, bringing you stylish headphones and a Walkman with a distinct finish in a variety of colours to match your own style. Revel in your music


like never before and listen to your favourite tunes closer to the true sound artists originally intended.

The "h.ear1" series comes in 3 different variants, "h.ear on1" headband-type headphones, "h.ear in NC1" Noise Cancelling

(NC) in-ear headphones, "h.ear in1" in-ear headphones. Sony's sleek h.ear1 series pairs well with their Walkman range and are available in deep shades ranging from viridian blue, cinnabar red, charcoal black, lime yellow and bordeaux pink for every type of personality.

Sony's "h.ear on" headband-type headphones oozes style combined with a comfortable fit. Sporting a 40mm HD driver unit that reproduces sounds up to 60kHz, and lightweight CCAW voice coils yielding high-linearity responses in high-pitched sounds. Together with titanium-coated diaphragms to minimise unwanted vibrations Sony aims to provide the ultimate listening experience. Comes securely packed in a handy carrying pouch and a foldable mechanism with cross-talk reducing cables, so you're always ready to be on-the-go.

Next in line are, the "h.ear in NC" which is a pair of noise-cancelling in-ear headphones focusing on a functional design and iconic aesthetics. Using Sony's newly developed compact 9mm high sensitivity driver unit, this slim and compact in-ear headphone can reproduce frequencies up to 40kHz. To ensure a fully immersive audio experience, the in-ear headphones feature a battery-powered, state of the art dual noise sensor technology and Automatic AI Noise Cancelling to filter out unwanted noise for up to 16 hours even in the noisiest of places. Easily rechargeable via microUSB should the battery run out.

The third product in the "h.ear" series is the 'h.ear in' headphones, designed with an aluminium housing which suppresses vibrations and reproduces high quality sounds. The "h.ear in" in-ear headphones houses a 9mm high sensitivity driver unit that supports High-Resolution Audio, together with Beat Response Control that helps improve the transient characteristics in the bass and delivers rhythm accurately, which combined with the acoustic port on the housing works to produce a more solid bass range and optimised diaphragm movements. Similar to both the "h.ear on" headphones, the "h.ear in" in-ear headphones come with a 4-wire configuration and a separated ground cross-talk reducing cable, for expanded sound and tight bass. 

[www.sony.com.my](http://www.sony.com.my)





Simon Whitford, Senior Regional Marketing Manager, Asia Pacific, WD (second from the left) and Margaret Koh, Sales Director, Asia South, WD (second from the right), together with Brand Ambassadors showing off the MyCloud Expert Series line of products

# WD's My Cloud OS 3 Goes Personal

WD develops a new operating system with new rich and intuitive features, making cloud storage much more personalised

Western Digital recently introduced significant improvements to their family of My Cloud personal storage devices. Included in the new improvements is a redesigned My Cloud OS 3 operating system and Software Development Kit (SDK) allowing better app integration, as well as a dual-drive My Cloud Mirror personal cloud storage that offers faster processing performance and increased memory than its predecessors.

WD's My Cloud OS 3 makes up most of the improvements, featuring an intuitive user interface that delivers a rich content-sharing experience. With back-up and sync capabilities elevating the personal cloud NAS offering, it retains the privacy and control found only in personal cloud devices. The newly developed OS features powerful new photo and video

capabilities via two new user experiences: MyCloud.com and My Cloud Albums app, with the former providing users' global access to their My Cloud through an intuitive web-based user interface.

MyCloud.com also enables file collaboration, comprehensive access management and a photos/videos gallery view. The My Cloud Albums feature is available for download come late September on iTunes and Google Play stores, allowing a My Cloud OS 3 user to send a link to a common location, or "album", on the My Cloud to all their friends and family. My Cloud OS 3 also features a new WD Sync that syncs data across multiple PCs and notebooks to ensure that important files are always available from any supported devices.

"We know our personal cloud customers

place the highest value on their personal content and enjoy the peace of mind from backing up PCs, smart phones and tablets too, and centralizing content on their My Cloud systems," said Jim Welsh, executive vice president and General Manager of Content Solutions Business at WD. "They tell us they are confident in the privacy, control and anywhere access we provide them with the My Cloud OS. Now, with My Cloud OS 3, we've made users' management of their digital lives easier than ever before."

The OS also allows automatic camera-roll backup of photos from smartphones and tablets together with a new transfer tool to easily move files to their My Cloud Devices. In addition, Chromecast and Chromebook will be supported by My Cloud OS 3.

WD My Cloud OS 3 is available starting the end of September 2015 as a free download on current My Cloud personal cloud storage devices. The devices My Cloud, My Cloud Mirror, My Cloud Expert Series EX2/EX4, My Cloud Expert Series EX2100/EX4100 and My Cloud Business Series DL2100/DL4100 are supported by My Cloud OS 3. The WD My Cloud mobile apps are now available for download on iTunes and Google Play stores. 

[www.wdc.com](http://www.wdc.com)


# Windows 10: First Devices With Iris Scan

Microsoft's new operating system is doing away with passwords. This is made possible by a new special camera made by Intel

**T**oo complicated, too time-consuming and too insecure: With Windows 10, Microsoft is finally going to get rid of the password. As an alternative, Microsoft's new Windows Hello login software will offer fingerprint scans, facial scans and iris scans.

The special 3D camera that features infrared technology, and which can reliably scan the iris or face and differentiate between a lifeless photograph and the real thing, is manufactured by Intel. The chip manufacturer licenses its RealSense technology out to manufacturers of laptops and all-in-one PCs.

Those who buy a new Windows 10 computer in a few weeks might just find out that their computer contains a RealSense camera, instead of a conventional webcam. However, this will vary from device to device. Intel's website offers an as-yet brief list (see table) of the laptops and all-in-one PCs that will definitely contain a RealSense camera.

However, those who have just purchased a new computer and those who use a desktop PC can still use Windows Hello. With its RealSense Developer Kit, Intel offers an external camera at the price of about RM533.00 (including VAT). The cameras will also make it possible for the devices to be controlled via gestures. 



## Notebooks

ASUS N551JQ (15")  
ASUS ROG G771JM (17")  
ASUS X751LD (17")  
HP Envy 15t Touch RealSense  
Dell Inspiron 15 5548 (15")  
Acer Aspire V 17 Nitro (17")  
Lenovo ThinkPad Yoga 15 (15")  
Lenovo ThinkPad E550 (15")


## All-in-one-PCs

Lenovo B5030  
Dell Inspiron 23" 7000  
HP Sprout

# Netflix Breaches The 65-Million Threshold

**H**aving gained 3.3 million new customers in the second quarter of the year, Netflix now has more than 65 million customers across the world. Of these, 2.4 million customers were outside the USA. Netflix is now available in Australia and New Zealand, and the Chinese and Japanese markets are about to be tapped next. The streaming service plans to be accessible in 200 countries by the end of 2016. 


# Immediate Shopping: Facebook And Google Are Testing Buy-Buttons

**M**aking purchases through advertising banners: According to Google, Facebook and Twitter, this is what the future of online advertising will look like. All three platforms are currently experimenting with buy-buttons, which are placed within advertisements. Consequently, the user will be able to make a purchase immediately, without having to first click his way through the shop in question. The benefit for the shops: The users do not need to register, and are logged in directly through the login data associated with Google or one of the social networks. The mode of payment is the only thing that has to be specified manually, along with the delivery address (in case of any doubts). Shops will also be able to address their favourite customer bases in a more targeted manner, since the advertisements associated with the three large platforms will be geared towards the users like never before. On the other hand, Google, Facebook and Twitter will be able to keep users within their eco-system – They won't have to leave the site to make a purchase. The system will also give rise to new revenue models: For example, Google plans to use so-called local inventory ads to win over retailers, whose smartphone advertisements will only be displayed within the respective environment. 






# Apple Now Has An Automobile-Sector Manager On Board

The rumours surrounding an Apple car – the iCar – have persisted for months, and they are now being fuelled further by a personnel acquisition: Apple has just hired Doug Betts, who was previously a top-level manager at Fiat Chrysler Automobiles, but the iPhone manufacturer's not releasing any information about his new job profile. Betts' LinkedIn profile only mentions 'Operations – Apple Inc' as his job description. Until November 2014, Doug Betts was, as a senior vice president, responsible for the product and service quality at Fiat Chrysler. Before that, he worked for Nissan, Toyota and Michelin. 

# Amazon Fire TV Stick 2 glimpsed on the internet


Amazon is apparently working on the successor to its Fire TV Stick. The new version of the streaming stick will allegedly feature a quad-core CPU and a 2-GB RAM, while a PowerVR Rogue GX6250 will guarantee fluid graphics. All of this would constitute a massive improvement over the previous Stick. It would also be possible to use the device to play Android games, which can currently only be played on the larger Fire Box TV. This information comes from the GFXBench benchmark site, which lists such a device under the abbreviation AFTS. 




# Apple's New iPod

Right on cue with the launch of Apple Music, the iPhone manufacturer has introduced a new series of iPods. The iPod shuffle and nano have simply been introduced in new colours, but the iPod touch has also been treated to a technical upgrade: The sixth-generation device now uses the A8 processor, which is also built into the new iPhone 6. However, the processor that's in the iPod is somewhat under-clocked. Furthermore, the display continues to be merely a 4-inch display. The rear side of the iPod touch 6G features a new eight-megapixel camera, while the front side has an improved facetime camera for video calls. The device is also compatible with ac-WLAN and Bluetooth 4.1. The iPod touch is now, for the first time, available with a 128-GB internal memory. This model costs about RM2,184.00, while the low-memory version of the iPod touch 6G is available for about RM,1116.00 – it's also available in a gold colour. 

# Nokia's Making Smartphones Again

Nokia was once the market leader for smartphones, but it missed the smartphone trend in such a colossal manner that the division in question now belongs to Microsoft. However, the Finns are hoping to make a comeback: Android phones made by Nokia are expected to be back in the future. This isn't just a gimmick, either: The company is looking to secure a significant share of the market. However, according to a statement that CEO Rajeev Suri, Nokia will merely design the devices – A partner will handle production. The first devices will become available in the summer of 2016, which is when one of Microsoft's exclusion clauses is going to expire. 

# Microsoft Office 2016 Is Ready

Microsoft Office 2016 is ready, and it is initially being released for Mac OS X. While Apple users are able to use the new versions of Word, Excel and PowerPoint since last month, Windows users will have to wait until the end of the year. Office 2016 is to be distributed through the Office 365 online subscription service, whose monthly costs range from RM48.00 onwards. The new version of Office is hoping to score brownie points with its cloud connection: In addition to being able to save documents on the hard drive, users will also be able to save them on Dropbox or MS OneDrive. Apple's iCloud service is not supported. 

# The End Of The Flash Player

After several critical security loopholes, experts are calling for the demise of the plug-in

In July, Adobe had to deal with three serious loopholes in the Flash Player within a single week. Although Adobe promptly shut the gates on hackers by updating its video plug-in, the whole episode left a bad taste in one's mouth. The software defects were so serious that Mozilla temporarily blocked the Flash Player in its Firefox browser. Internet experts believe that the wave of security loopholes means that the once-popular plug-in should now be done away with altogether. This is what Alex Stamos (Facebook's CSO) had to say on Twitter: 'Even if it takes another 18 months, Adobe should put an end to the Flash Player right now'. According to him, this is the only thing that would force website operators to update their technology. After all, the Flash Player stopped being the only way to present videos and interactive contents on websites a long time ago: For example, YouTube now uses HTML5 for this purpose – This also makes the videos compatible with Apple devices. Apple has had doubts about the security of the Flash Player for years, and blocks the corresponding contents on iPhones and iPads. Security analyst Graham Cluley pulls no punches when it comes to his own feelings towards the plug-in. This is what he wrote on his blog: 'The only people who still love the Flash Player are the criminals themselves.' 🇩🇪



## New Moto G And Moto X Are Waterproof

The 2015 models of the Motorola Moto G and X will be waterproof. Along with Sony's smartphones, the new Motorola devices will then be among the few devices that boast this feature. Motorola is also improving its price-performance ratio by upgrading the Motorola G's rear and front-facing camera from 8 to 13 megapixels and from 2 to 5 megapixels. Furthermore, the battery capacity is being increased by 20 percent. No specifications have been released for the somewhat larger Moto X. The devices are scheduled to be launched in autumn. 🇩🇪

## Microsoft's Still Earning Millions With Xp

Support services for Windows XP officially ended more than a year ago, but Microsoft is still making millions with the product. The system is still being used by companies, and especially public authorities, who are reliant on security patches. For example, according to the American newspaper 'Computerworld', the US Navy pays 9.1 million dollars to Microsoft, in order to be able to receive patches for Windows XP, Office 2003, Exchange 2003 and Windows Server 2003. Background information: The special software on 100,000 of the navy's computers only runs on XP. 🇩🇪

## Project Quantum: Amd With Mini-Pc


With Project Quantum, AMD is unveiling a 25 x 15 centimetre PC, and it really does pack a punch: The little device has enough computing power to simultaneously display a game on three 4K screens. However, AMD needed a certain amount of help from its largest competitor in order to pull this off: Project Quantum uses Intel processors. AMD's new Zen CPU-series has been announced for 2016. AMD has installed a water cooling system, in order to ensure that the fast and tightly-packed chips are cooled in a satisfactory manner. The drawback: The 800-watt mains adapter does not fit into the small design, and must be connected externally. Project Quantum is currently just a prototype, but it is expected to be launched this year. AMD has not disclosed the exact price, but it is expected to be as high as about 3000 prices. 🇩🇪






# GoPro Hero4 Session: Square, practical, waterproof

**G**oPro has shrunk its newest camera model, the Hero4 Session. The square-shaped cube is only half the size of its predecessors, and it weighs less than 100 g. Furthermore, it is also waterproof up to a depth of 10 metres. However, since the camera does not have its own display, the new GoPro needs to be paired up with an iOS or Android smartphone, onto which the videos are transferred.


The smartphones can also be used to make all kinds of adjustments, such as those related to video quality. The Hero4 records full-HD images and takes 8-megapixel pictures. However, Professional 4K recordings remain the exclusive province of the somewhat larger Hero4 Black. According to GoPro, the Session's battery can hold out for two hours, but this was not borne out by the practical test: Unless all the energy-saving modes are activated, the battery runs out after about an hour – However, this should be enough for recreational athletes. The mini-camera features a casing that can be used to couple the device with all the well-known GoPro holders. Furthermore, the device's two microphones can record audio with minimal disruptions. The Hero4 Session is already available, and it costs about RM2,087.00. 




## Apple And Samsung For Electronic Sim Cards

**A**ccording to the Financial Times, Apple and Samsung are negotiating with the mobile telephony consortium GSMA about the introduction of a standard for electronic SIM cards. The so-called eSIM is a card that is built into the smartphone, but which can be electronically adapted vis-à-vis different providers. The benefit: If you switch over to a new provider while on vacation, you won't need a new SIM card. Consequently, it would be a lot easier to switch over to a new tariff plan. The disadvantage: You would no longer be able to take an old mobile phone with you when you go on holiday, as the eSIM would be bound to a specific device. 


## BMW, Audi and Daimler acquire Nokia Here

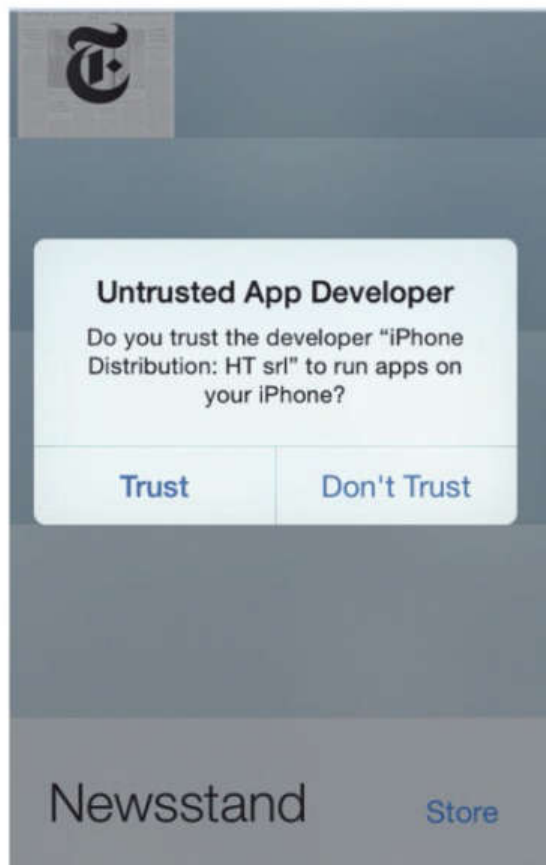
**A**ccording to media reports, Audi, BMW and Daimler are acquiring Nokia's Here map service. The three German car manufacturers are making the purchase at the price of 12 billion Ringgit Malaysia. From the car manufacturers' point of view, the deal offers two main advantages: They will no longer be dependent on map providers like Google, and they will obtain a separate database for future (self-driving) cars. Here is the ideal basis for this, since it's the map service that offers the most precise road data. It's not yet clear whether the deal represents the demise of the free-of-charge 

## Commodore As A Smartphone

**M**any people associate Commodore with the C64, but the brand is now making a comeback with the Android-based Commodore PET smartphone. This is the device's special feature: It features two pre-installed emulators, which can be used to play old C64 and Amiga games on full-HD mobile phones. In other respects, the 5.5-inch Commodore phone features average equipment: A 1.7-GHz octa-core CPU, 13-MPixel (rear) and 8-MPixel (front) cameras, a 2-GByte or 3-GByte RAM and a 16-GByte or 32-GByte memory. The smaller and larger versions cost RM1,310.00 and RM1,601.00, respectively, and both versions are now available. 

## The First EU Country That Wishes To Ban Whatsapp

**A** legislative proposal that seeks to ban the popular WhatsApp messenger has been dubbed the 'snooper's charter' by the British press. David Cameron, the British prime minister, wants to ban means of communication that cannot be monitored. Such steps are alleged to be necessary in order to win the war against terrorism – Even though the effectiveness of such measures has never been verified. 



Hacking Team can tap non-jailbroken iPhones too – but not without user interaction

# Hackers Leak Data Of Spy Company


Italian spy firm Hacking Team fall victim to data theft, with far-reaching consequences

The 400 GB internal data of Hacking Team divulges, among other things, the countries in which the Italians have sold their espionage software, which has now been published as a Torrent file. It contains numerous emails sent by the company directors to customers as well as internal mails. Various invoices of buyers have also been leaked – amounting to more than four million euros.

The leaked data also contains the passwords of employees and their customers. Particularly embarrassing is the fact that even security professionals use simple passwords such as 'Passw0rd'. The leak also contains references to

zero day bugs in browsers and applications, for example, Flash.

Moreover, the company also makes it possible to tap non-jailbroken iPhones. Customers of the espionage company include authorities of western countries such as USA or Switzerland, among others. But the company has also exported its software to countries with dubious understanding of democracy.

Although the company has always denied this, the leaked data has now proven otherwise. Azerbaijan, Bahrain, Russia and Uzbekistan, among others, have purchased espionage tools from this company, probably to intercept government critics. Even the website and Twitter account of Hacking Team were hacked and spread the news about the attack. 



## Data Theft Of The Month

### ASHLEY MADISON: 37 MILLION DATA RECORDS STOLEN

The dating site Ashley Madison was hacked. They got away with internal information about the site as well as with the data of the user accounts. They want to publish this stolen data – including delicate details about sexual preferences of individual users, if the website is not permanently removed from the net. The CEO of the parent company of Ashley Madison (Avid Life Media), Noel Biderman, confirmed news about the hack.

### EPIC GAMES: FORUM DATA STOLEN

The game developer Epic Games has fallen prey to a data attack. The hackers stole personal information of its forum's users. The stolen data includes usernames, passwords, email addresses and birthdates. The company shut off the forums after the attack and reset all user passwords. Epic Games has still not provided a detailed statement about the attack.

### UCLA CLINIC NETWORK: PATIENT DATA STOLEN

Hackers penetrated the data network of the University of California, Los Angeles (UCLA), including the computers of four clinics and 150 offices. The hackers have stolen patient data, which includes social security numbers. The attack took place in September 2014 but was discovered only sometime this year.




# BlackBerry Sync Has Malware

It has been recently discovered that there is a critical error in the synchronisation software of BlackBerry devices.

According to security experts, all users, who have synchronised the data of their BlackBerry devices using the link app of the

manufacturer, have been affected.


In version 1.2.0.53 and the older versions, there is a bug through which hackers can execute any code on the affected computer. For this, they use manipulated MP4 files that are foisted upon the users. BlackBerry

has already taken action and has offered an update for the link app. Especially corporate clients, who widely use BlackBerry devices, should install the update as soon as possible. 

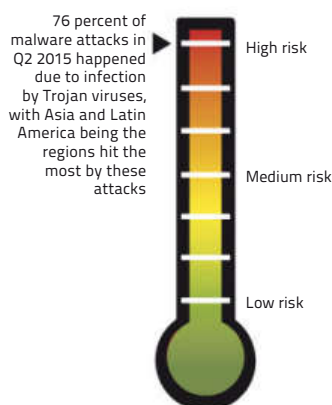
# Mac Firmware Update Provides Protection Against Hackers

With the help of a firmware update, Apple looks to prevent hackers from writing their own code in the EFI software of Mac computers. Hackers were able to do this because of the implementation of the hibernation mode (ACPI mode S3) by Apple, which was frequently criticised by security researchers.

Immediately after the Mac computer is woken up from hibernation mode, hackers could write directly in the storage area of the boot ROM, which is actually protected. Even worse, the malicious code can survive even a re-installation of the operating system. Apple has solved this problem with a patch that is now available.

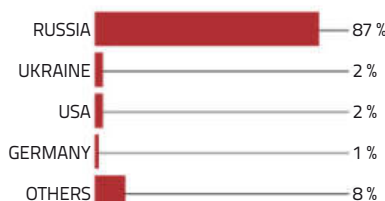
However, the fix is available for the latest models only; the update is not intended for Macs that were built before 2011. As a result, hackers can still take advantage of the bug in these computers. Whether Apple will expand the fix and resolve problems on older devices as well with the update is not known yet. 

## Danger Barometer



## Mobile banking Trojan

Almost all the 1527 banking Trojans discovered in the first quarter of 2015 were designed for use against Russian users says security company Kaspersky.



## Zero day bugs are rare – thankfully!

Bugs, for which there is no known protection, i.e., the so-called zero day bugs, are found every month. The good news is that they are not many in number.



Number of the Month: **37 million**

data records stolen from Ashley Madison's servers

# Hands Up! We Have Your Data Hostage!

By Thiban Darmalingam, Barracuda Networks

In February, The FBI put out a USD3 million reward for information leading to the arrest of the world's most wanted hacker, Evgeniy Mikhailovich Bogachev who is alleged to be the creator of the malwares Cryptolocker and Gameover Zeus which have been used to steal more than USD100 million from businesses and consumers worldwide. The reward is the biggest ever offered by the agency.

While Bogachev remains at large and faces charges including conspiracy, money laundering, bank fraud and wire fraud; his notorious file-encrypting ransomware called Cryptolocker is back with a vengeance, stronger than ever before.

Cryptolocker and similar ransomware are a type of malware that hijacks data on the infected computer and demands a ransom from the user. The hacked holds hijacked data that cannot be accessed without the right decryption key. Any attempts to save data that has been held ransom will end with the data being wiped out from your computer or network.

## Holding your data ransom

Think of your network as a house. A threat vector is basically a way for an attacker or robber to break into your house. So your threat vectors are your window, your door, your roof or any possible way someone can enter your house.

Similarly there's a lot of ways to get into your network. It's really easy for an attacker to find an open window to get into your network.

Here's a video demonstrating Cryptolocker in action: [https://youtu.be/k4QrK\\_IBRcl](https://youtu.be/k4QrK_IBRcl)

Malware can be delivered by a number of methods:

- **Phishing attacks** – Are the most common means of infecting a user. An email is sent to invite the victim to click on a malicious link or open a corrupted

attachment. To date this is the most effective method in spreading malware to users who do not have the latest email protection or have not been educated on phishing attacks.

- **Drive-by downloads** – Users are infected when they visit a compromised website. These websites can be compromised through malicious web code, an infected third-party piece of software or website code that has been changed by the attackers. The risk can be mitigated with a web filter and an updated antivirus software. Other strategies include limiting user permissions and disabling Java in the browser.

- **Computers that are already infected with malware** can download and install new malware, including Cryptolocker.

- **Mix Method** – Sometimes the infection is a result of a mix of the above methods. For instance, a user attempts to install something, get tricked into installing something else and infected by a drive by download in the background. The majority of malware is installed when users are tricked into randomly clicking on something.

That's why user education is so important to the overall malware defense strategy.

## Securing all entry points

Since Cryptolocker and its variants are constantly adapting to new defences, it isn't enough to identify the virus and protect you and your organisation from that specific threat. The best approach is to secure the threat vectors, so that the entryways to the network are fully protected.


One break in an attack sequence can prevent the installation of Cryptolocker. By using a layered approach to security, you will be able to break the sequence of infection at

several levels.

Every method of entry on a network such as Emails, web and mobile applications, remote access, web browsing, mobile internet browsing as well as public and private cloud access is a threat vector that needs to be protected. In other words every network, cloud storage, mobile device and computers have to be protected via a combination of Web Application, NG and SPAM Firewalls, Email Security solutions, web filters, mobile device manager and more. This will ensure a total protection from malwares such as Cryptolocker.

There are a few other things you can do to protect against Cryptolocker. Specific information on software restriction policies and CryptoPrevent can be found in this guide at Bleeping Computer. Basically you want as many layers of defense that you get between your data and the attackers.

In the event that you cannot stop an infection, ensure you have all your data safely stored via backup solutions and disaster recovery methods. This will ensure that compromised data can be restored in the event of a ransom attempt.

Only with a total threat protection strategy will an organisation be able to create a proactive security strategy in their efforts to fend off malware infections. Remember, your network only as strong as its weakest link. 





# Panda Security Detects Record Levels Of Malware Created To Infect Users

Detection of malware broke records in second quarter of 2015, with average of 230,000 new samples daily

**P**andaLabs, Panda Security's dedicated detection laboratory, draws attention to the record increase in the creation of new malware samples in its latest Quarterly Report for the second quarter of 2015. The malware detected has been created to infect both businesses and users alike.

In the second quarter of 2015 alone there were an average of 230,000 new malware samples created, which means a total of 21 million new types in these three months. Compared to the same period last year, where there were 160,000 registered samples, there has been an increase of 43%.

This large number of samples is, for the most part, mutations of already known malware. This way, cybercriminals try to stop the antivirus laboratories from detecting the infection.

As regards the types of malware, Trojans continue to be, by a large margin, the most common (71.16 percent) and are the main source of infection, with 76.25 percent of users infected by this malware. This quarter also saw the proliferation of PUPs (Potentially Unwanted Programs) which accounted for 14.39 percent of infections and placed just behind Trojans.

Among the main threats that this study collected, the use of Cryptolocker to infect businesses and users was highlighted.

In the case of users, cybercriminals have begun to reuse an old technique to infect users, one which was first seen 20 years ago. It involved infecting users via a macro in Office documents, especially Word. To complete this attack, the criminals included a blurred image which could only be seen if the user activated the macros. Once the user does this, they are infected with Cryptolocker.

Businesses are also at risk from infection by Cryptolocker, such as the example of Ryanair, which lost 5 million dollars via a

transfer to a Chinese bank. Other companies that have been victims of information thefts include CareFirst BlueCross BlueShield and the online dating site AdultFriendFinder.


'Cyber hackers are looking at businesses more and more as it is relatively easy for them to steal information', affirms Luis Corrons, Technical Director of PandaLabs. 'Sometimes it's as simple as introducing a variant of Cryptolocker in a file that is sent to an employee and, once it's opened, the security of the entire company is at risk'.

This quarter also saw attacks on mobile devices. One of the ways in which hackers have duped their victims is by WhatsApp. Called WhatsApp Trendy Blue. It passes itself off as a 'new version' of the application with extra features when, in reality, the only thing it does is sign the user up to an expensive billing service.

In June, PandaLabs detected a phishing campaign directed at Android developers

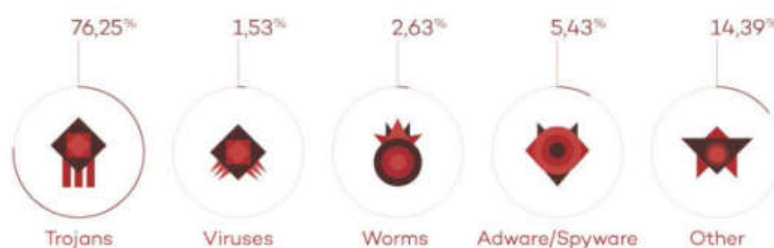
that published their creations on the Google Play store. The trick consisted of stealing password information in order to propagate malware via Google Play.

PandaLabs' Quarterly Report also collected information on the rate of infection worldwide, according to computer's protected by Panda's software. The areas with the highest rate of infection were Asia and Latin America, which placed above the average of rate of infection (33.21 percent). China was the country with the highest rate of infection (47.53 percent), followed by Turkey (43.11 percent) and Peru (41.97 percent).

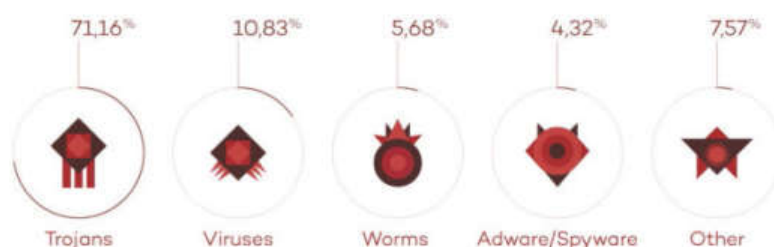
On the other end of the scale, Europe and Japan were the areas with the lowest rate of infection. Sweden (21.57 percent), Norway (22.22 percent), and Japan (23.57 percent) are the countries with the lowest infection rates worldwide. 

[www.pandasecurity.com](http://www.pandasecurity.com)

## INFECTIONS BY TYPE OF MALWARE IN Q2 2015



## NEW MALWARE CREATED IN Q2 2015, BY TYPE



# ASUS ZenFone Selfie

*Not too long after ASUS unveiled and launched its critically acclaimed smartphone, the ASUS ZenFone 2, the Taiwanese tech giants launched a variant of the phone that's catered towards the camera and selfie-savvy market, called the ZenFone Selfie*

By CHIP Team

## Specifications

The ZenFone Selfie features a relatively large 5.5 inch display, with a Full HD screen resolution, powered by a Qualcomm Snapdragon 615 processor, with 2GBs of RAM, running Google's Android 5.0 operating system, with a built-in memory of 16 or 32GBs of storage space, which can be expanded even further thanks to the addition of a microSD card slot. For those who carry more than one number around, the ZenFone Selfie also has dual-SIM support built-in, so you don't need to carry two phones with you all the time.



Lollipop memory of 16



## Design

ASUS was very particular with how the ZenFone 2 was designed, and this attention to detail can be seen on the ZenFone Selfie as well. The phone is only 3.9mm in thickness, and is ergonomically designed to be curvy, so that it fits into your palms comfortably. The iconic Zen design is implemented in this phone as well, as the aluminium accents on the phone gives the ZenFone Selfie a more dignified look.



## Display

The ZenFone Selfie also features some pretty impressive display technologies, which includes a super responsive 60ms touch response time, Gorilla Glass 4 which protects the display against scratches and cracks, as well as an anti-fingerprint coating which also reduces the likelihood of the display being smudged by fingerprints.

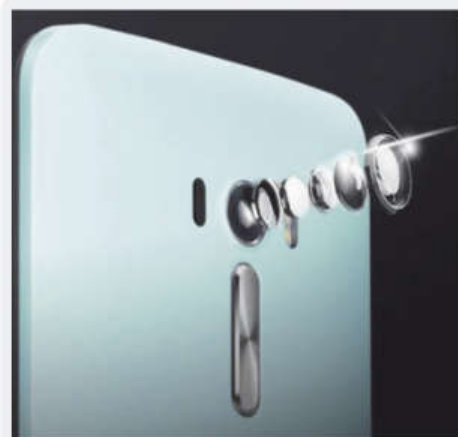




## PixelMaster 2.0

### PixelMaster

The twin 13.0MP cameras on the ZenFone Selfie are great, but what takes it to the next level is the PixelMaster software that comes with them. The new PixelMaster now has five new additional modes, bringing it to a total of 16 different photo-taking modes for your pleasure, including the brand new Super Resolution mode, which quadruples the resolution of your photo from the original 13.0MP to a whopping 54.0MP, and does this without hurting the quality of your photo.



### Camera

The ZenFone Selfie features two 13.0MP cameras on the front and at the back of the phone, which serves as the raison d'être of the phone. Not only that, each camera is also accompanied by its own dual-tone LED flash that helps users take more life-like shot when it comes to lighting up a scene. Using a Toshiba BSi sensor, the cameras also have an aperture count of f2.2, allowing them to take well-lit photos even in the most dimly-lit conditions. Coupled with a new laser autofocus detection system, the cameras will also focus faster than ever, allowing users to snap that split-second moment and not miss it.

## SonicMaster 2.0

### Sound

Thanks to ASUS' SoundMaster technology, the speakers in the ZenFone Selfie are louder than ever, combining components such as a new Five Magnet Speaker, which not only amps the volume, but also extending low-level frequencies while reducing the distortion by a significant amount. Coupled with ASUS' new AudioWizard 2.0, you can also select audio presets which best suits your needs, be it for gaming, watching videos, or music-listening.

# Technilexicon: High Bandwidth Memory

*When it comes to reading and writing data, high bandwidth memory is far more efficient than your typical graphics memory. In this article, we take a look at the steps taken by AMD and SK Hynix to achieve this latest feat in memory technology* By Markus Mandau

PC components today currently operate under specific technical limits, and this holds true especially for chips that store electrical charges, such as flash storage and RAM. The computer industry has hit this wall for some time now, and are currently working on a solution to break through this limit. One such method under research is to physically stack up memory modules, a technique that is currently employed to store a large amount of data on SSDs.

Samsung is the first SSD producer to use this technique, and now has 2TB SSDs on offer. Three years ago, this type of flash storage numbers are unheard of, as the normal storage density on an SSD chip was 32GBs per chip. Now, in addition to increasing the storage density, a new form of 3D RAM is also offering higher speed numbers, and not just storage value: Introducing the new High Bandwidth Memory.

Chances are, you may have heard of High Bandwidth Memory, or HBM already as this is the same technology that is currently used by AMD in its latest AMD R9 Fury X and Fury graphics cards. They are the first of their kind in the industry, with the HBM RAM stacked up to four layers on top of one another, instead of just being placed randomly on the board.

Consequently, the Fury is also more energy-efficient than graphics cards using GDDR5 RAM, on top of offering faster transfer rates than the more commonly-used memory. HBM is currently a joint-venture between AMD and Korean memory manufacturer SK Hynix, and they have aspirations to launch second-gen HBM memory next year. These devices are expected to further enhance performance numbers of not only graphics cards, but other devices as well.

## Breaking Performance Limits


RAM chips currently occupy the most space on graphics cards, and are also responsible for a third of the power consumption. That said, the trend of producing better graphics, 4K resolution contents and VR goggles ensures that memory requirements continue to grow. AMD installs a GDDR5-RAM of up to 8 GByte in its high-end cards, where it groups 16 memory chips around the GPU. Each memory chip is connected to the GPU via 32 lines. Taken together, all the lines of the 16 chips form a 512-bit (maximum) interface. A higher number of RAM chips cannot be positioned on a printed circuit board, since the space requirements and the power consumption have reached their limits. The only thing you can do is shrink the RAM cells, so that more data can be stored on a memory chip.

High bandwidth memory re-starts the data race for GPUs. For starters, it has a 1024-bit interface, which is twice as wide as a conventional GDDR5 RAM. Two important innovations make this possible: Through-Silicon Vertical Interconnect Access (TSV) and

interposers. TSVs are small data lines, which are laid out through the layers of a stacked chip. Each layer comprises of multiple banks, in which the individual RAM cells are grouped. For the TSVs, small holes with a diameter of about 10 micrometres are etched into the silicon. After a protective oxide coating has been applied, these holes are filled with copper. The concept has been around for a long time, and it has also been used in prototypes of 3D chips, but the technology is only now being used for the first time in a mass-produced product. In an HBM memory stack, 1024 TSVs run vertically downwards through all four layers. They are organised in eight channels, each of which has a width of 128 bits. The TSVs end in the form of small contacts (micro-bumps), which connect the memory stacks to a lower-level control logic system: It forwards the data to the GPU, or to the corresponding outlets of the graphics card in the form of the output (e.g. to the monitor via HDMI or to the mainboard via PCIeexpress).

## Data Transfer on 5000 Lines

This forwarding of data from the HBM blocks to the GPU cannot be accomplished with normal data lines, because 1024 connections needs to reach the GPU from each HBM. Since four HBM blocks surround the GPU, the transfer of raw data involves more than 4000 such connections. Lines for addresses and control commands are also included in this; which means that at the end, the entire transfer of data involves a total of about 5000 connections. A new component is also responsible for transporting all this individual data: The interposer, which lies beneath the HBM blocks and the GPU, establishing a connection between the two components. In principle, it is a chip that does not compute, but simply guides. Thousands of TSV connections are laid out through the interposer, and each one of these connections ends in the form of a micro-bump (contact) – The contact could, for example, lead to the GPU.

The HBM architecture that features an interposer requires that the GPU and the memory be situated right next to each other, so that they will be able to use short lines to communicate with each other. At the same time, the TSVs also dissipate heat quite well. The widening of the interface to 1024 connections per HBM stack facilitates the reduction of the clock frequency and the attainment of a data throughput of 512 GByte per second. Taken together, all of these factors reduce the power consumption and the cooling effort associated with an HBM graphics card. On the other hand, the disadvantage is that first-generation HBMs can only offer a maximum of 4 GB of RAM. For now, that is sufficient for the latest games and 4K content, but as far as 4K is concerned, certain graphics features – such as an elaborate anti-aliasing system – will require more memory in the future. 



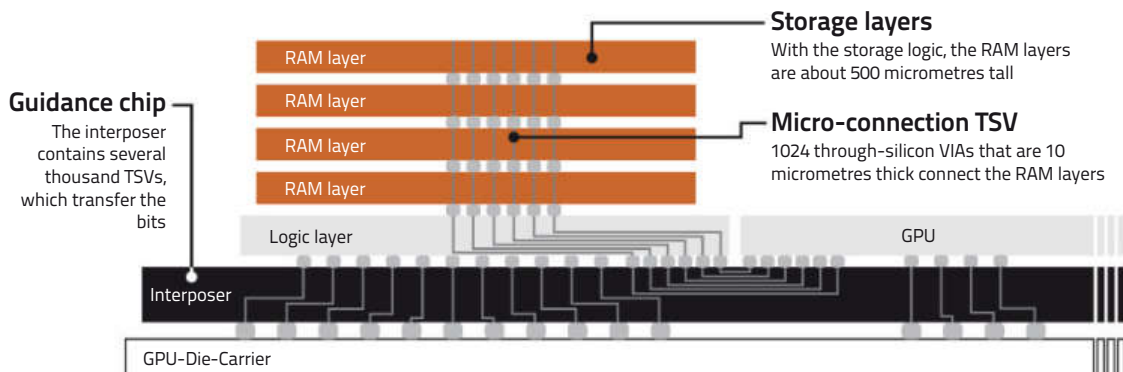
# High Bandwidth Memory

HBM stacks up four layers of RAM memory on a small chip-area, which, in graphics cards such as AMD's Fury X and is directly connected to the GPU. This reduces the RAM's energy consumption and simultaneously enhances the card's overall performance.



## HBM On The Graphics Card

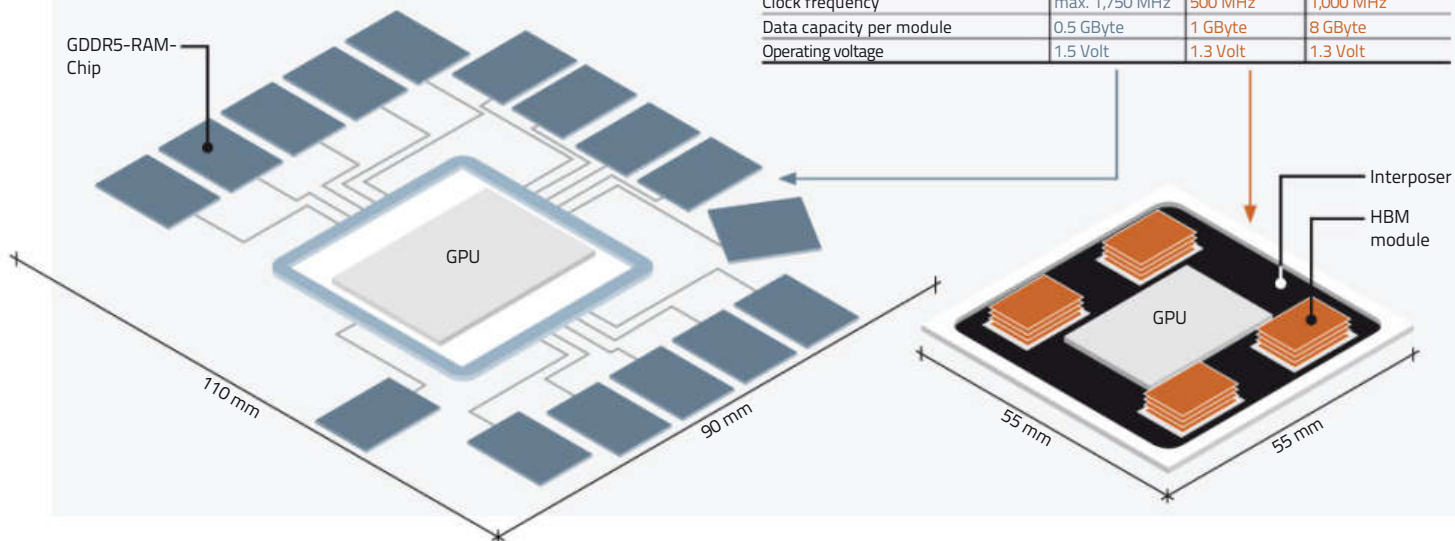
In HBM, the bits stored in RAM cells are transferred onto a logic layer via through-silicon VIAs (TSVs). The logic layer uses an interposer to release the data to the GPU or a peripheral equipment.



## Comparing HBM And GDDR5 RAM

HBM links the GPU and the RAM on a silicon layer (interposer), thereby obtaining a higher performance from a smaller area than a conventional GDDR5 RAM, which uses lines to send the data to the GPU.

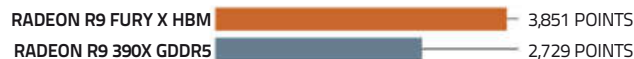
	GDDR5-RAM	HBM 1.0	HBM 2.0 (2016)
Number of memory modules	bis zu 24	4	4 (subsequently 8)
Number of storage layers	1	4	8
Data lines per module (bus width)	max. 32	1,024	1,024
Transfer rate per module	max. 28 GByte/s	128 GByte/s	256 GByte/s
Total transfer rate	max. 336 GByte/s	512 GByte/s	1,024 GByte/s
Clock frequency	max. 1,750 MHz	500 MHz	1,000 MHz
Data capacity per module	0.5 GByte	1 GByte	8 GByte
Operating voltage	1.5 Volt	1.3 Volt	1.3 Volt



## HBM Is Powerful For 4K Resolution

Thanks to HBM, the Radeon Fury X leaves the competition in the dust, especially when it comes to high resolutions. It is about 25 percent faster than AMD's Radeon R390 X, which has an 8-GBYTE DDR5 RAM.

### 3DMARK: FIRE STRIKE ULTRA 4K



### BIOSHOCK: INFINITE 4K



\* FRAMES PER SECOND



3DMark Fire Strike Ultra tests how well a graphics card runs in conjunction with a 4K resolution

# Going Cashless

Thanks to a growing number of smartphone apps and the increased use of NFC technology in our daily lives, there are several ways for you to start going cash-free, if you wanted to. In this article, we take a look at some of the latest solutions that support this technology.

## QR Code

You can scan a QR Code with your camera and transfer the amount owed using a payment app

## Wireless NFC

This solution transmits payment data via near field wireless network, suitable for quick, contactless payments

## Bluetooth

Despite NFC being the preferred method of cashless payment right now, Bluetooth is still a good wireless payment alternative that has a wider reach. It also consumes less power than NFC chips.

## Audio Signals

With the built-in microphone, smartphones can also receive acoustically-transmitted payment data.

## NFC Systems For Cash Cards

Financial institutions are now starting to embrace NFC technology, by issuing cash cards that support the new wireless transfer protocol.



Girogo - NFC chips with a credit count of 200 Euros for contactless payment at cash terminals



Paypass (MasterCard) - You can pay up to 25 Euros at NFC cash terminals with this card, without having to enter your card's PIN number



PayWave (Visa) - Similar with MasterCard's PayWave, you can pay up to 25 Euros at NFC cash terminals with the card without keying in your PIN number

## Wallet in your mobile phone

You can manage your account in the "wallet apps" of providers

**SmartPass (Vodafone)** A monthly charge of 9.90 euros for sales less than 600 euros; charges for top up (1% or 1 euro) and sending to other SmartPass users (0.10 euros)

**MyWallet (Telekom)** A monthly charge of 0.99 euros for annual sales less than 600 euros (from 2016); 2.95% charges for top up

**Base Wallet (Base)** Use of this app is free

**Mpass (O2)** Use is free of cost; possible only with an NFC sticker on your mobile phone

## Places where you can make contactless payments without cash

Shopping with a mobile phone instead of cash? This is becoming possible in more and more shops. The fact that cashless payment is supported by supermarket chains in Germany should make it more popular.



**Supermarkets (Aldi, Lidl, Edeka)**  
Aldi North has recently equipped 2400 branches with NFC cash terminals



**Department stores (Media Markt, Karstadt)** Media Markt shall support NFC payments from the autumn of 2015



**Fast Food (McDonalds, Starbucks)**  
One can easily pay using an app at Starbucks



**Petrol stations (Aral, Shell)** Aral has been supporting NFC payments using credit cards since 2011



# Is This The End of The Road For Cash?

*Financial experts are pushing for a new world of digital currency. In this article, we take a look at Germany as a case study to see if it's a good idea.* By Claudio Müller

Could you hide your savings under your pillow if money only existed virtually? Financial experts such as Peter Bofinger, one of the five members of the German Council of Economic Experts, doesn't care. He, much like many economists in his position, is seeking for the reduced dependency of cold hard cash. Whilst this is an advantage for banks, it is a disadvantage for the people in their day to day lives.

Corruption, black money, tax fraud – all these can be countered by abolishing coins and notes, say the opponents of cash. This is because virtual money flows can be tracked more effectively. If you are not involved in any shady dealings, you need not be afraid of such surveillance – which is a forced argument as the proponents of continuous online monitoring for "fighting terrorism" furnish such an argument to justify the comprehensive control of digital communication.

The way our life is getting more and more transparent online, our offline shopping behaviour will also become transparent if there were no cash. This is because every purchase, every money transfer will be stored in the bank's

systems, regardless if it was done using cash cards or wallet apps on mobile phones. The anonymity of cash payment will be gone – taking with it a large part of our autonomy. It's not without reason that the Russian novelist Fyodor Dostoyevsky wrote the line "Money is coined freedom" for a prisoner of a Siberian gulag.

Obviously, anyone can choose to make cashless payments. In an ideal world, it is convenient, quick and modern. But we do not have a choice when it comes to EC cards with NFC chip; banks are distributing the NFC cards forcibly. It is expected that everyone will have these NFC-equipped cards by 2017. This is alarming also because of the security problems that the Girogo system, which is supported by savings and other banks, is facing. The always-on NFC chip stores the last 15 transactions and three recharge processes in an unencrypted manner. What's more, every purchase is stored with the date, time, amount and dealer ID. If this is not the basis for a detailed personal profile, then what is? With just a little effort, the data can be read and combined with other personal data, which is dangerous if it falls into the wrong hands. 🇩🇪

## Pros and cons of cashless payment



- Payments on cash counters are faster – if the amount purchased is small
- Convenient. Provides a good overview of your finances. Chargebacks are possible
- Dealers save money because cash storage and security is very expensive
- Black money flows and corruption can be traced and countered more effectively
- Central bank interest rates can be lowered because all the money remains in the digital form in banking systems



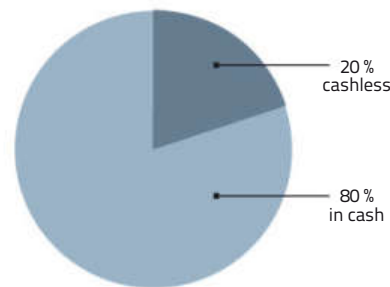
- Every transaction can be traced, thus making the person's financial life very transparent
- Loss of freedom and autonomy. Card users will be dependent on service providers
- Risk of data theft because some data on the NFC chips are unencrypted
- No standard solution; businesses still have to use multiple solutions for now
- Downside for children, street musicians, homeless people for instance, who rely on cash

## ANALOGUE VS DIGITAL

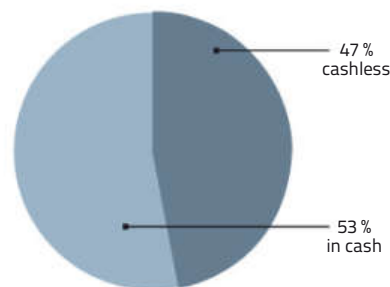
### Germans and their cash

Numerous surveys show a trend: Germans cannot and don't want to do away with coins and notes yet.

#### NO. OF PURCHASES IN THE RETAIL MARKET

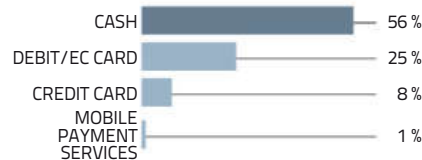


#### SALE IN THE RETAIL MARKETS



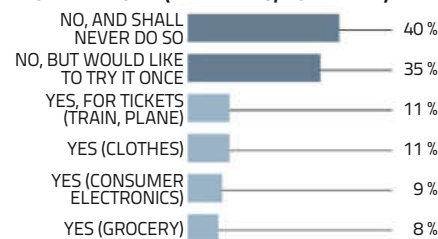
Source: EHI Retail Institute

#### PREFERRED PAYMENT OPTIONS IN SHOPS



Source: Bitkom

#### HAVE YOU EVER MADE PAYMENTS VIA YOUR MOBILE PHONE (AND IF YES, FOR WHAT?)



Source: Pricewaterhouse Coopers



**"Money is coined freedom"**

Fyodor Dostoyevsky,  
The House of the Dead

**60,000**  
**NFC cash terminals**

cover about 8 percent of the retail market in Germany

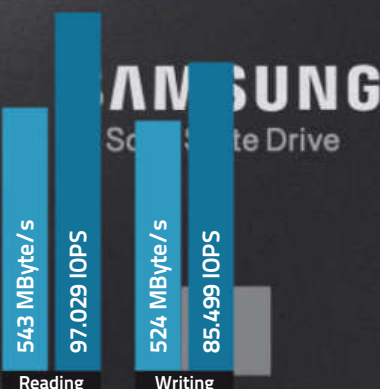


# Introducing New High Speed SSDs

*A new generation of Flash disks is fast outpacing some of the best SATA-based SSDs in the market using PCI Express ports to set new transfer speed records* By Markus Mandau

- Sequential reading and writing, measured with Diskbench (MByte/s)
- Distributed reading and writing of 4-KByte blocks, measured with AS-SSD, in IOPS (input/output operations per second)

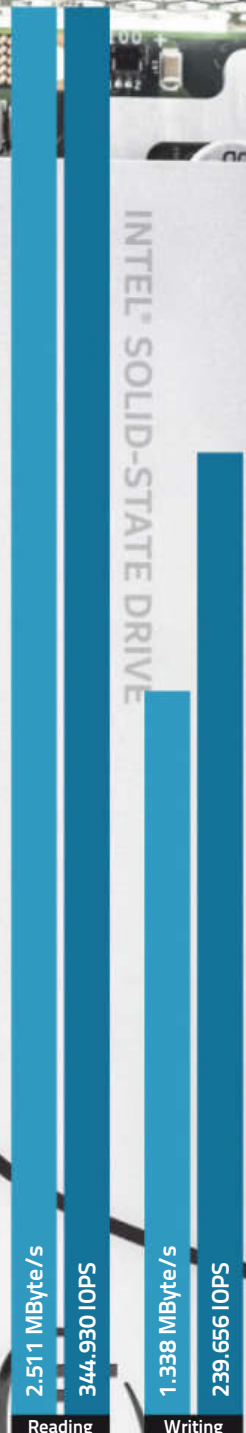
**Samsung  
Evo 850**  
SATA-SSD



**Kingston  
HyperX  
Predator**  
PCI-Express-SSD



**Intel  
SSD 750**  
PCI-Express-SSD



Ever since they were first introduced, Solid State Drives, or SSDs have been the de-facto choice for desktop and notebook PC enthusiasts, as they offer blazing speeds, especially when it comes to booting and software startup, and not forgetting super-fast transfer speeds. However, a new generation of flash disks has made even more progress in this regard, transferring data three to five times faster than the latest SATA-based SSD models, which increases the potential of Flash memory-based storage options. These new storage options are must-haves for ambitious PC enthusiasts. Introducing the new PCI Express-based solid state drives.

Previous generation SSDs have a design size of 2.5 inches. Like the slow magnetic disks, they are connected via the flat, red SATA cable, and even has a speed limit. Theoretically, SATA is capable of reaching a maximum speed of 600 MB/s. However, in practice, speeds of 500 to 550 MByte/s is what is usually achieved. The new PCIe-based SSDs transmit their data through PCIe lanes, and the maximum transfer speed depends on the number of lanes that are used to connect them to the CPU or the chip set. In the server zone, PCIe disks with eight lanes are used. A home PC only uses four lanes, which results in a theoretical speed limit of four GB/s. We ran a test to find out how close the new SSDs come to this limit, and the following section provides information about the test results.

## Unleashing The Potential of Flash Storage

Unlike the uniformity associated with SATA drives, several designs and connection types are available for PCIe drives, which, in turn means that it's not exactly easy to select a certain product. The drives are available in the form of plug-in cards and M.2 memory modules. Our test winner, the Intel SSD 750, is a PCIe card. On the other hand, Samsung's SM951 and XP941 disks are M.2 memory modules. The PCIe plug-in cards are compatible with every new PC mainboard, but only boards featuring Intel's latest series-9 chip set have an M.2 port, which transfers data via PCIe. The Kingston Predator and the Plextor M6e offer both installation options: The M.2 SSDs feature a PCIe adapter card. The following diagram shows you how to house the SSDs depending on your configuration. Expensive gaming boards have an M.2 slot that can accommodate the

SM951 without an adapter.

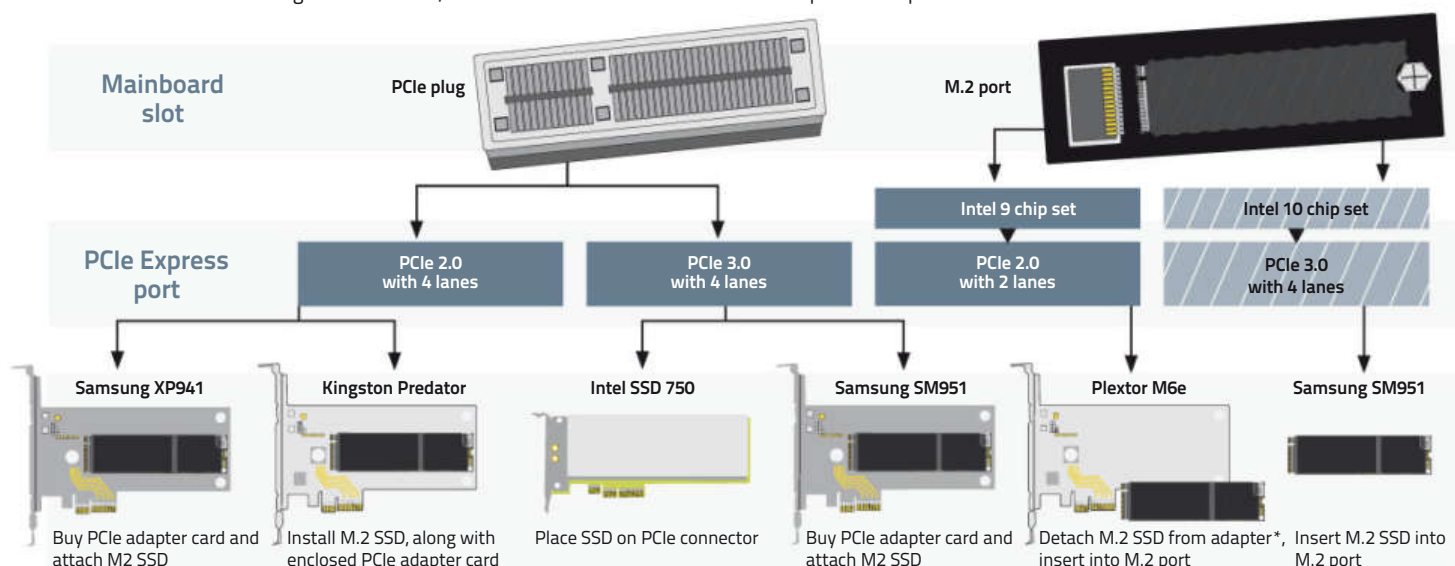
Two factors determine the potential speed of a PCIe SSD: The first of which is the number of lanes, and the second one is the PCIe version. PCIe 2.0 transports a maximum of 500 MB/s per lane, and the value rises to 1.0 GB/s in version 3.0 – However, these values are unattainable in practice, since an overhead always emerges during the data transfer process. The measurements that we took with the help of the AS-SSD benchmark and Diskbench for sequential reading and writing illustrate the sheer magnitude of the differences: With a maximum reading speed of about 700 MB/s, the Plextor M6e is at the rear of the test field. It only transfers data through two lanes with PCIe 2.0. The central part of the field is occupied by the Kingston Predator and the Samsung XP941, both of which use PCIe 2.0 and four lanes – In this case, speeds of up to 1400 MB/s can be expected. The Samsung SM951 and the Intel SSD 750 (our test winner) use four lanes with PCIe 3.0. Neither one of these two devices reached the theoretical limit of 4 GB/s, but they do attain speeds of more than 2.0 GB/s.

## A High-Speed Interface

The SM951 and the Intel 750 are quite close to each other in terms of their transfer rates, but the Intel drive has a clear lead when it comes to the maximum number of input/output operations per second (IOPS). This is because of the new, Flash-optimised 'non-volatile memory express' (NVMe) transfer method. All the other SSDs in the test field still use the AHCI (advanced host controller interface), which was developed with SATA. The AHCI and NVMe transfer methods determine how a CPU collaborates with the SSD controller to process the data that is loaded and written from the hard drive. The AHCI – which was developed for magnetic disks – adversely affects the number of IOPS, while the Intel device clearly dominates the 'access time' category, thanks to NVMe. The longer the SSD is in use, the stronger the advantage. The IOPS values of the PCIe SSDs that still use AHCI are in the region associated with good SATA devices. Even though the Intel drive's values sink during the endurance test that makes use of Iometer, the relative gap between the Intel device and the rest of the test field remains in

# The Right Port For Each SSD

In the case of PCI Express SSDs, it all comes down to which ports the motherboard has. An M.2 slot for PCIe can only be found in boards featuring Intel's series-9 chip set. If such a slot is not present, you will need an adapter card for the PCIe connector. You should also be mindful of the minimum number of lanes and the right PCIe version, so that the SSDs will be able to deliver a peak-level performance.




\* To be released in autumn, along with Intel's new Skylake CPU platform

\* Loss of manufacturer's warranty

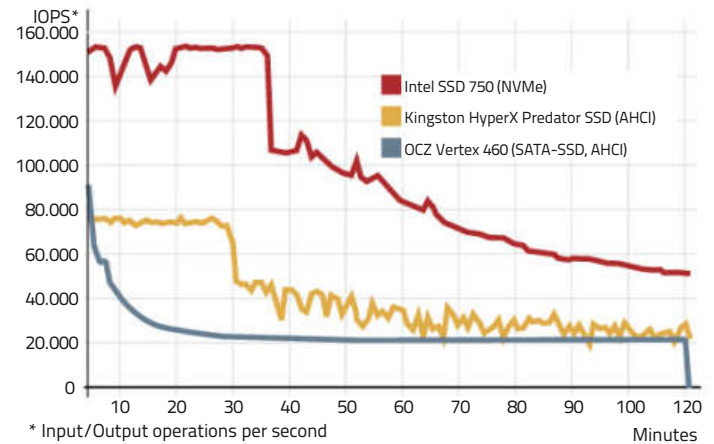
place. The reason: In case of AHCI, the CPU only has one list for processing the storage commands, and it contains a maximum of 32 entries. The process is not optimised for modern multi-core CPUs or Flash chips, since these two components are only maxed out by the parallelised processing of the I/O commands. On the other hand, NVMe can create several lists, which can consist of up to 65,536 commands. This is ideal for distributing several small reading and writing operations across multiple CPU cores. NVMe makes full use of its strengths on server SSDs, but the benefits are quite spotty in scenarios involving PCs, since data operations that necessitate a correspondingly high number of IOPS are quite rare (such as in database applications). Nevertheless, from a purely technical point of view, NVMe is the transfer method that is tailor-made for Flash.

### PCIe SSD As A Boot Drive

If you want to use an NVMe SSD like the Intel 750 as a boot drive, you will need a board featuring Intel's series-9 chipset, along with the newest firmware – Intel's support page lists the suitable mainboards. Even in case of Samsung's AHCI SSDs, you should find out which mainboard detects them as a drive – ramcity.co.au maintains a compatibility list for the XP941 and the SM951. Boards bearing the label Z97 or X99 usually support the Samsung SSDs, as well as the Intel 750. On the other hand, the Kingston and the Plextor are low-maintenance devices. They can even boot up from older boards, provided that there is a free PCIe slot. 

## New NVMe SSD interface versus AHCI

The Iometer test shows that constant writing-related stress even slows down the latest SSDs. Intel's SSD stays ahead of the pack thanks to NVMe, while the Kingston device falls back to the level of a SATA SSD. Those who are looking for an uncomplicated PCIe SSD should go for the Kingston. The drive is relatively fast, and hardly gives any problems during the installation process. Those who are building a new PC should get the next-generation board featuring Intel's series-10 chipset. It is designed for PCIe SSDs, and will probably support two M.2 slots with PCIe 3.0 and four lanes. Boot-up processes based on an NVMe SSD may then be implemented as a standard feature.



## Testing PCIe SSDs





	INTEL SSD 750	SAMSUNG SM951	SAMSUNG XP941	KINGSTON HYPX. PREDATOR SSD	PLEXTOR M6E BLACK
Offered models (capacity)	400 GB/1.2 TB	128 GB/256 GB/512 GB	256 GB/512 GB	240 GB/480 GB	128 GB/256 GB/512 GB
Model in the test	1.2 TByte	256 GByte	512 GByte	480 GB	256 GB
Overall score	99.4	80.1	65.5	64.0	54.9
Transfer rate (40%)	100	88	57	63	33
Access time (30%)	100	50	49	45	46
Practical tests (30%)	98	100	94	85	93

### MEASUREMENTS & DATA

	NVMe	AHCI	AHCI	AHCI	AHCI
Interface	NVMe	AHCI	AHCI	AHCI	AHCI
Port	PCI Express 3.0 with 4 lanes	PCI Express 3.0 with 4 lanes	PCI Express 2.0 with 4 lanes	PCI Express 2.0 with 4 lanes	PCI Express 2.0 with 2 lanes
Form factor	PCIe plug-in card	M.2 2280	M.2 2280	M.2 auf PCIe-Adapter	M.2 auf PCIe-Adapter
RAM (capacity)	DDR3 (2.048 MByte)	LPDDR2 (512 MByte)	LPDDR2 (512 MByte)	DDR3 (1,024 MByte)	DDR3 (512 MByte)
Controller	Intel CH29AE41AB0	Samsung S4LN058A01	Samsung S4LN053X01	Marvell 88S59188	Marvell 88S59293
Flash type	Mikron 20 nm	Samsung 19 nm	Samsung 19 nm	Toshiba 19 nm	Toshiba 19 nm
Diskbench: Sequential reading	2,511 MByte/s	2,127 MByte/s	1,169 MByte/s	1,400 MByte/s	714 MByte/s
Diskbench: Sequential writing	1,338 MByte/s	1,245 MByte/s	1,017 MByte/s	1,013 MByte/s	570 MByte/s
Diskbench: Response time (reading/writing)	0.02 ms/0.02 ms	0.04 ms/0.03 ms	0.04 ms/0.03 ms	0.04 ms/0.04 ms	0.04 ms/0.04 ms
Diskbench: Distrib. reading (512 B)1	55,666 IOPS2	24,435 IOPS	24,262 IOPS	25,103 IOPS	25,610 IOPS
Diskbench: Distributed writing (512-B blocks)1	48,988 IOPS	37,305 IOPS	35,952 IOPS	22,286 IOPS	26,093 IOPS
Diskbench: Distrib. reading (4 KB)1	44,393 IOPS	19,317 IOPS	18,638 IOPS	21,252 IOPS	19,953 IOPS
Diskbench: Distributed writing (4-KB blocks)1	44,605 IOPS	35,161 IOPS	31,813 IOPS	22,168 IOPS	21,528 IOPS
AS SSD sequential reading	2,316 MByte/s	1,928 MByte/s	1,100 MByte/s	1,289 MByte/s	670 MByte/s
AS SSD sequential writing	1,324 MByte/s	1,208 MByte/s	866 MByte/s	874 MByte/s	544 MByte/s
AS SSD: Distributed reading	344,930 IOPS	166,304 IOPS	126,781 IOPS	89,702 IOPS	101,098 IOPS
AS SSD: Distributed writing	239,656 IOPS	85,540 IOPS	66,874 IOPS	92,980 IOPS	100,389 IOPS
PC Mark 7 Secondary Storage	5924 points	6041 points	5682 points	5140 points	5615 points

<sup>1</sup> SINGLE-THREAD MEASUREMENT <sup>2</sup> INPUT/OUTPUT OPERATIONS PER SECOND

TOP CLASS (100 – 90.0) UPPER CLASS (89.9 – 75.0) MIDDLE CLASS (74.9 – 45.0) NOT RECOMMENDED (44.9 – 0) ALL SCORES IN POINTS (MAX. 100)  YES  NO





feature



# Emojis And Their Meanings



*Chat emojis have been around for ages. In fact, it's hard to remember a time we didn't use it. And yet, it is sometimes used incorrectly. We show you what these symbols express* By Melissa Montasser and Elias Lulay



Pensive face



Not an astonished but a flushed face – can be easily recognised by the red cheeks



Angry face



Smiling face with sunglasses to show coolness



Relieved face



Confused face



Scared/surprised face (with cold sweat on the forehead)



Face with tears of joy



Worried face



Tired, yawning face



Persevering face



Disappointed, dejected face



Crying face



Face with a look of triumph (not snorting because of anger!)



Face savouring delicious food



Confounded face



Anguished face



Weary face



Sleepy face (no, he doesn't have a runny nose!)



Astonished face



"Hushed" emoji. Meant to signify keeping your mouth closed.



Sleeping face



Whistling face (often also used as a kissing emoji, but there is a better one for that – the one with the heart in front of the mouth)



Absolutely speechless, silent



Disappointed but relieved face



Pouting/angry face (hence the red colour)



Imp (evil character)



'Speak no evil" monkey



Very tired cat



Nothing is good! (Japanese gesture)



Face with OK gesture! (Japanese gesture)



A man bowing deeply out of respect



The "praying" mean "please" or "sorry" depending on the context (Japanese gesture)



Sweat (often incorrectly used as rain drops)



Dizzy symbol, dazed feeling (often wrongly used as shooting star)



Fast movement (not wind, and not – with all due respect – a fart!)



Not soup but a cup of tea



Love hotel (in Japan, a room can be rented by the hour – this is popular among young couples)

# Your Own TV Channel

*Periscope, Meerkat and YouNow: A new generation of live streaming apps turns the smartphone into a TV studio* By Benjamin Hartlmaier

Smartphone owners are used to being on the move with little computers in their pockets. However, most of them probably do not know that their telephones are mini-format television studios that they can use to put their lives on the internet in the form of a live documentary. This is made possible by a range of innovative apps such as Periscope, Meerkat and YouNow.

However, there are a few things that you should consider before you start broadcasting.

Apps such as Periscope and Meerkat are fundamentally different from YouTube in just two areas: The videos are transmitted and received live, and the smartphone is the primary technical base, instead of a laptop or a PC. Apart from that, the services have certain things in common with YouTube: Anyone who satisfies the relevant technical requirements can participate, there is no hard and fast programme or broadcast schedule and a few 'stars' have



already emerged, even though the streaming apps are just a few months old. One of them is a young American who goes by the nickname of Mr Cashier. On YouNow, users can see how he spends his days at a checkout counter of a little shop in New York.

The service, which is especially popular with children under the age of 15, also provides a view of nurseries and classrooms. Periscope, which was acquired by the social media giant Twitter and launched in March 2015, is somewhat more grown-up. The application could, for example, make it possible for you to view a live stream emanating from the roof of a skyscraper in the neighbourhood of Hell's Kitchen, New York. You don't necessarily have to agree to all this, but this is what the new world of social media looks like.

## LEGAL ISSUES

### "Rules and Regulations of Online Broadcasting"

The fact that it has become easy to send live streams of everything and anyone around the world does not mean that you're allowed to do everything. In this corner, we answer some of the most important legal questions regarding live-streaming.

#### What Am I Not Allowed To Stream?

A significant problem related to live streaming involves the several copyright violations that could be committed. For example, you would be guilty of a copyright violation if you stream a movie from the theatre, or a programme that is broadcast by a pay-to-watch TV channel. Broadcasting a live concert is as problematic as broadcasting background music. In the case of

the aforementioned activities, the streamer would need to obtain permission from the rights holder before they start streaming something that is deemed to contain copyright material.

#### Who Am I Allowed To Film?

Everyone has a right to his own images. This means that you should obtain permission from the person who is to be filmed, in order to avoid legal difficulties. This applies particularly to children (the parents must also approve) and vulnerable people. What is allowed is the filming of celebrities or persons who may be considered to be accessories, such as the people in a pedestrian

area. Rallies may also be streamed, as long as you do not single out any individuals.

#### Do I Need A Broadcasting License?

According to the Interstate Broadcasting Treaty, ARD, RTL and co. aren't the only ones who need a broadcasting licence: Under certain circumstances, tele-media facilities like Periscope and Meerkat also need such a licence. What's important is whether you broadcast regularly at a specific time – such as every Monday at 1300 hours – and whether the contents are journalistic or editorial in nature. So don't worry if all you're streaming are just videos of your pets.

# How To Stream Your Own Personal Documentary

We're using Periscope as an example to show you how the new live streaming apps work. Meerkat can also be used in a similar manner.

The first thing you need is an iOS or Android device. The minimum system requirements for Periscope are Android 4.4 or iOS 7.1. Apart from that, you should also have a Twitter account, which you can use to register with Periscope. Now, this isn't exactly a requirement, as you can also register using your mobile phone number. However, a Twitter account makes it easier to find other Periscope users and disseminate your broadcasts. You should therefore allow Periscope to use your Twitter app. This will also enable you to post your live streams on Twitter.

## Seeing And Being Seen

After installing the app, it will navigate you to an overview menu, where the most popular live feeds are being shown. Clicking the preview window starts the video. If you want to search for specific persons or providers, you can select the group symbol in the top bar. In addition to popular Periscope users, this will also recommend the accounts that you are already following on Twitter.

The magnifying glass at the bottom right of the screen makes it possible to run a targeted search for more users. If a user who you are following goes live, you will be notified of current broadcasts via push messages. The stream will also appear in the watch overview, which can be accessed through the TV symbol. After you have activated a live stream, you can simply view the stream or communicate with the broadcaster. You can do this in two ways: You can write out a comment in the line at the lower edge of the screen, or you can send him hearts by tapping any random point on the screen. The messages and hearts appear on the broadcaster's display in real time.

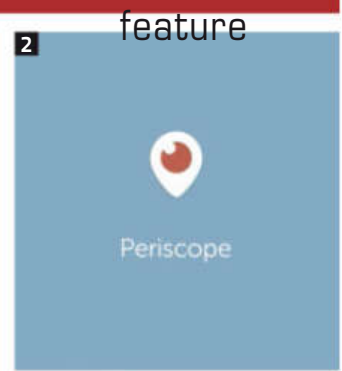
If you want to transmit a live stream of your own, you should switch over to the global menu or the watch menu. Now, click the red camera icon. The app will then show the broadcast set-up assistant. The upper left portion of the screen lets you specify whether the stream is to be public or private. A public stream can be viewed by anyone who possesses the link or has a Periscope account.

Theoretically, anyone who can access the internet could follow your stream, since the link can easily be forwarded. If the stream is private, only followers who have been authorised by you in advance can watch and listen to the stream. The section underneath the target group settings allows you to assign a title to the broadcast. The three buttons underneath the title allow you (from left to right) to disclose your location, limit the comment function to your followers and post the link to your broadcast on Twitter. Clicking the 'Start broadcast' button lets you go live on air.

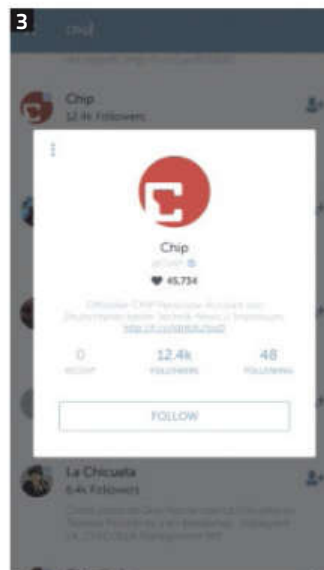
The bottom right portion of the screen tells you how many people are watching you. Click the symbol in the upper right portion of the screen or double-click the display to switch over from the rear camera to the frontal one. To guarantee an optimal level of quality, you should be connected to a WLAN during the broadcast. When you're on the move, you will need at least a 3G connection, otherwise Periscope will not work. Apart from all this, you should also keep an eye on your data usage:

According to our observations, Periscope uses about 3.0MB per minute when it's broadcasting information. In order to prevent your TV channel from turning into a data hog, you should ensure that you do not stream data using a mobile connection too frequently. 📶

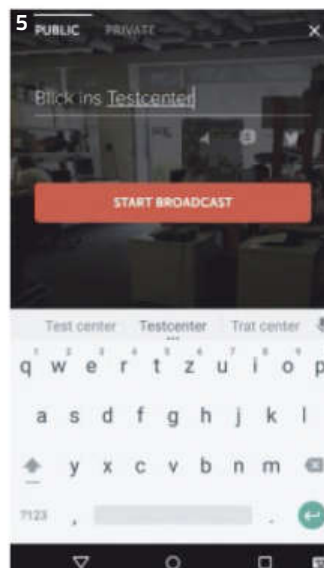
## Installation



## Viewing



## Broadcasting







## 2 x 7 Cameras

The goal areas are monitored with six cameras, which are fixed as high up as possible, such as the stadium roof. The seventh camera, which is a high speed camera, is aligned to the goal line. A super slow motion shot for TV is also produced with the feed from this camera.

## Rules For Goal Line Technology

The most important technical requirements for FIFA are:

- Precision of the system must be less than 15 mm.
- Dirt on the ball or poor visibility must not affect the results.
- The signal must reach the referee within a second

## Red Card For German Companies

Prior to the use of Hawk Eye, two German service providers have failed to create a proper goal line system in the Bundesliga.

- Goal Control, which was used at the 2013 World Cup functions similarly to the Hawk Eye, but is too expensive to set up and use.
- The Fraunhofer IIS meanwhile had a more cost-effective solution, but ultimately failed with its magnetic field system.

## How Does Hawk Eye Work?

14 cameras monitor the goal posts. The signals from two cameras are usually sufficient to calculate the position of the ball, although the rest are used to check when the ball happens to be at a location that some cameras might not be able to see. To reduce lag, the calculations are done at a data centre near the stadium. It is estimated that within one second, the referee will get a message about whether the ball was inside the goal post or not, eliminating worries about the computers taking too long to compute the results.

## Where Does The Feed Go To?

The camera's feed is sent to a computer in a van which is located near the stadium. There are two operators in this vehicle, who communicate with the fourth official.

## Referee On The Phone

If the software analysis shows that the ball was inside the goal, the referee gets a corresponding signal on his headset and an overlay and vibration alarm on his 'Goalphone'. Hawk Eye Innovations has developed this smartwatch in collaboration with a technology partner.

## Real Time Analysis

Fans watching on TV will see a real-time repeat of the goal line scene from the Hawk Eye high-speed camera, to see whether or not the ball really crossed the line. Stadium spectators however will only get to see an animation of the ball crossing the line, or otherwise.





# No More Wembley Goals

*In or out? The question of all questions will be answered by computers in the future* By Roman Leipold

It is one of the best told sports stories: it's been almost fifty years; the football world is still arguing about the Wembley goal. Romantics of the sport will regret that more and more associations are using goal line technology.

That said, football fans will never run out of conversation topics even if wrong goal decisions are given rarely. Heribert Bruchhagen, the chief of Eintracht Frankfurt, says: 'Even if we had introduced this technology in Germany ten years back, we would not have had to use it.' Wrong penalty and offside decisions happen more frequently, practically in every game, which is why only video evidence – and not romanticism – would bring more fairness.

The Deutsche Fußball Liga (DFL) has decided to use the services of the British provider Hawk Eye Innovations for its implementation of goal line technology. A DFL speaker says that this is because 'the company offered the complete package that we needed'. An alternative could have been GoalRef from Fraunhofer IIS in Erlangen.

The system generates weak magnetic fields in the goal area. Small coils are integrated in the

ball. If it enters the magnetic field, it can be located with precision. Thoralf Dietz from Fraunhofer IIS says, 'Thanks to its simple design (easy infrastructure installation in the stadium), GoalRef is reasonably priced and will prove to be an alternative not only in the professional field, but also for amateurs in the long term.' Hawk Eye is installed only during the Premier League because even the second division clubs shy away from making an investment of 135,000 euros per season.

DFL also didn't speak much about replay videos for stadium and TV viewers. At home in the living room, viewers can see a real-time image in super slow motion and animation. Viewers in the stadium however only see a rendered version. With this in mind, DFL wants to prevent delicate situations – for example, actual or alleged handling of the ball – from causing annoyance in the stadium. This approach is in keeping with the practice of not repeating any controversial scenes on stadium screens, which has been followed since long.



## BACKGROUND

### Hawk Eye vs Hand of God

TV evidence could have prevented one of the most infamous bad decisions of football history: Maradona's legendary goal in the football world championship quarter final against England in 1986.



### RM 660,000

That's what each of the 180 Bundesliga clubs pay per season for the use of the Hawk Eye. This comes to 8,000 Euros per game.



### Hawk Eye For Offside Calls?

Schalke's Horst Heldt sees the goal line technology as nothing more than a partial solution. 'If we are to change one thing, we should do it the right way, by including video evidence in the case of debatable decisions such as offside calls.'



## €135000

That's what each of the 18 Bundesliga clubs pay per season for the use of Hawk Eye. This comes to 8000 euros per game.

PHOTOS: ISTOCKPHOTO/AKSONOV (PUBLISHER STADIUM); DPAP/PICTURE ALLIANCE (WEMBLEYTOR); REUTERS/HANNIBAL HANSCHKE (POKAL); WOLFGANG RATTAY (PORTRAIT HELDT); EDDIE KEOGH (CAMERA); STEFANIE LOOS (SMARTWATCH); GETTY IMAGES/BOB THOMAS (MARADONA); WWW.PREMIERLEAGUE.COM (HAWK EYE SCENE) ILLUSTRATION: ISTOCKPHOTO/FRANKRAMSPOTT (CAMERAS)



# Restart with Windows 10

*Microsoft has recently launched its latest operating system, Windows 10. In this article, we talk about the new operating system, and its most important and useful features*

*By Benjamin Hartlmaier*

PHOTO: JULIANE WEBER



It's already been a couple of months since Microsoft launched its latest operating system, Windows 10 to the masses. The main pull for Windows users to upgrade to Windows 10 is the fact that owners of Windows 7 and 8 licences are eligible for a free upgrade to the new operating system.

Then came some bad news. On July 2nd, Microsoft manager Terry Myerson announced that on release date, only those who participated in the Windows Insider programme will receive an upgrade to Windows 10. That said, despite what was previously announced, the Insiders will not receive the final version, but a permanent beta version of the operating system.

Users of Windows 7 and 8.1 who had previously reserved the upgrade using the Get Windows 10 tool will instead be the first users who will be allowed to upgrade to the final release version. That said, the upgrade did not roll out simultaneously, but in stages so that Microsoft's servers weren't overloaded by the number of people upgrading. Once the users who have made reservations have been taken care of, all the other computers using Windows 7 and 8.1 will receive the upgrade.

In terms of the cost, only one thing has been made clear so far: The new operating system will only be provided free of charge to users who are using an activated version of Windows 7 or 8.1 – This offer shall be valid for a period of one year after the release date. Those who have installed an older version of Windows will have to pay for the new one.

## Windows 10 Introduces Some New Changes

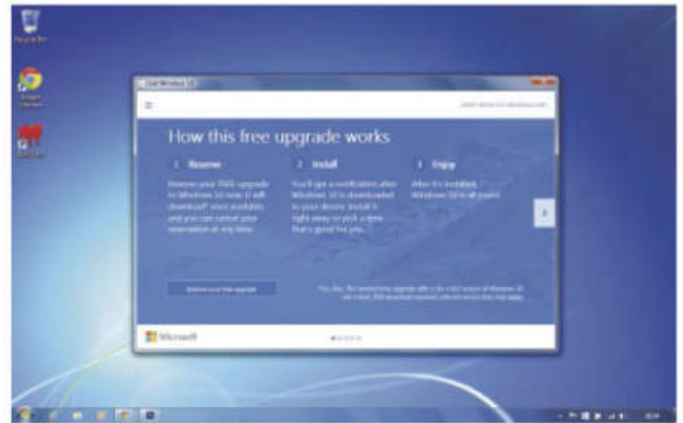
If you're looking to purchase a retail copy of the new Windows 10, there are two versions available in the form of Windows 10 Home and Windows 10 Pro. The retail prices for these versions of Windows 10 are set at RM629.99 for Windows 10 Home and RM1,099.00 for Windows 10 Professional.

Perhaps the most surprising piece of news regarding the release of Windows 10 is the news that this will be the last version of Windows made available. According to Microsoft, there will not be a Windows 11. The company is looking to start delivering extensive updates containing new features; the same strategy Apple uses to push updates to its MacOSX operating system.

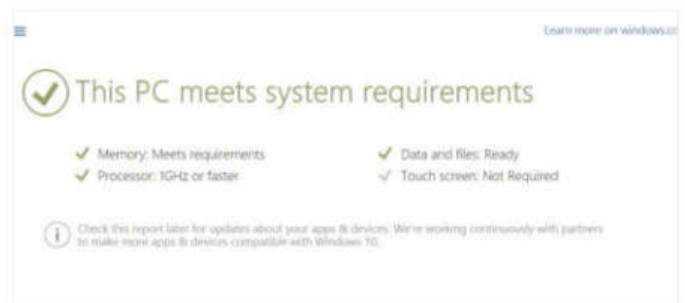
Another new aspect is that users will have to register to Windows Live in order to be able to use core features such as Cortana. That being said, not being able to use the digital assistant program might not be at a big loss as the feature is a big data hog, because if you're not careful, you may inadvertently be sending a lot of personal data to Microsoft's servers. That said, this function can also be deactivated. We'll show you where you could disable the options in the next few pages.

That said, Microsoft has also brought in a number of positive changes. The Start menu is back, albeit with some very welcome changes, and the platform-related chaos in the form of Windows 8, RT and Phone 8 is no more thanks to Continuum, and how the operating system runs smoothly on PC, laptop, tablet and smartphones. All in all, the new operating system represents a new beginning for users and even Microsoft.

## INFO



The settings of the upgrade tool (>>Check PC<<) let you check whether your computer is ready for Windows 10



You will see this message if your PC satisfies all the requirements for the upgrade

## The system requirements for Windows 10

This table gives you an overview of the minimum requirements. Furthermore, all the updates should be installed on the previous operating system.

OS (for free upgrade)	Windows 7 SP1, Windows 8.1 Update
CPU	1 GHz
GPU	DirectX 9 with WDDM 1.0 driver
RAM	1 GByte (32 Bit)/2 GByte (64 Bit)
HDD	16 GByte (32 Bit)/20 GByte (64 Bit)
Display	1.024 x 600 Pixel

## Free upgrade: Who gets what?

There will only be two consumer editions of Windows 10: Home and Pro. This table will give you an overview of who gets what.

Windows 7	Windows 8	Windows 10
Starter	8.1	Home
Home Basic		
Home Premium		
Professional	8.1 Pro	Pro
Ultimate	8.1 Pro Student	

# This Is How The Upgrade Works

The installation process for Windows 10 contains a number of stumbling blocks, but our tutorial will let you jump right past them

## 1 Start The Installation

The upgrade tool will notify you as soon as the upgrade becomes available. To open the menu, click on the Windows 10 icon on the taskbar. The pop-up menu will tell you to reserve an upgrade slot for when the time comes. In order for the upgrade process to start, you will also need to ensure that your Windows 7 and 8.1 installations also have the latest updates installed. It is also recommended that you back up your files, especially the ones in the C: drive, in case the upgrade process accidentally deletes them. Whilst it technically shouldn't happen, it's always better to be safe than sorry.

## 2 Setting Up Windows 10

After the installation process is completed, Windows 10 will greet you with the 'Quick Access' screen. That said, if you wish to customise your security features and whatnot, click on the 'Adjust Settings' option that is on the lower corner of the window. This will lead you to the data protection settings, which allows you to turn off the feature that sends your input to Microsoft.

## 3 Adjust Data Protection

The first step involves determining whether your contact data, calendar data, voice inputs, keyboard inputs, location data and location history data are being sent to Microsoft. The second step involves browser security and WLAN connections. When you use the new Edge browser to surf the internet, you should ensure that the SmartScreen filter remains activated, in order to protect yourself against drive-by infections. Microsoft reads your browser data, in order to be able to provide a website forecast facility. For security reasons, you should deactivate the feature that automatically connects you to public hotspots.

## 4 Microsoft or Local Account?

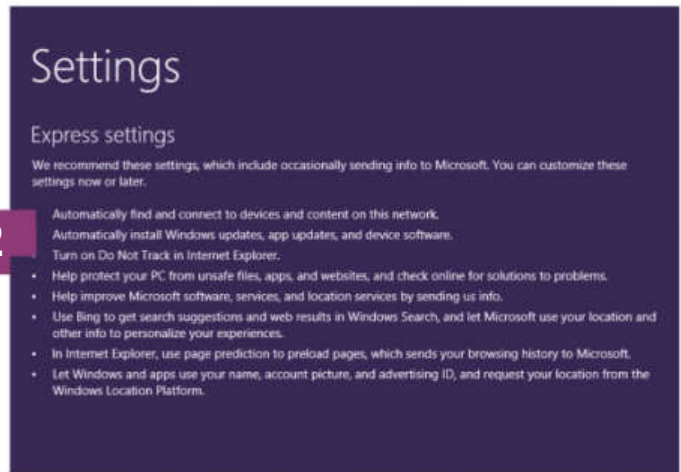
With Windows 10, Microsoft is giving you the option to log in with either a local account, or one that is connected to your Microsoft account, the latter allowing you to synchronise your account across all Windows-based devices that you own.

If you do not have a Microsoft account, the page lets you create a new one. Such an account is a prerequisite for being able to use Cortana, OneDrive, Office 365 and the OneNote function in Edge. However, Windows 10 can also be used without a Microsoft account. To create a local account, click 'Skip this step'. If necessary, you can subsequently turn the local account into a Microsoft account.

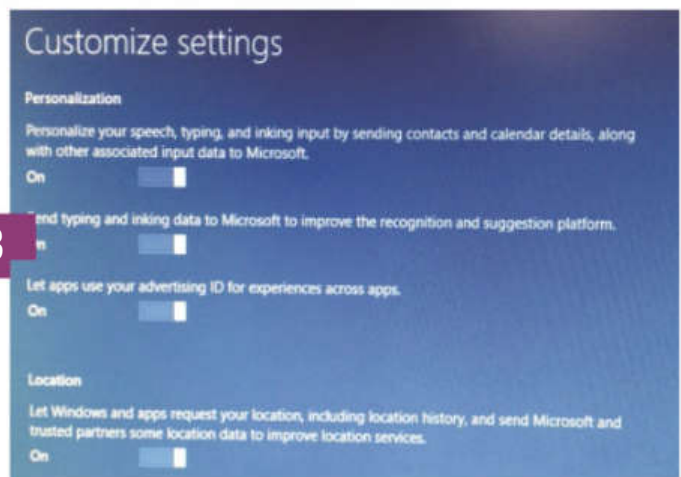
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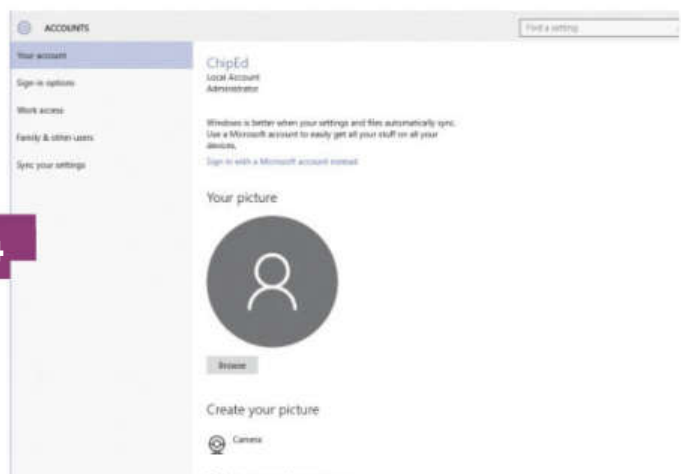
2



3



4



# Edge: The New Browser

Reading, editing and sharing. The successor to Internet Explorer sports quite a number of interesting features

With Windows 10, Microsoft is turning away from Internet Explorer after 20 years. The new Windows browser is called 'Edge', and is supposed to be better than its unpopular predecessor. In order to make improvements to features such as the layout, the typography and the graphics, Microsoft sought development-related assistance from web specialists working for Adobe.

Compared to Internet Explorer, Edge features a contemporary and tidy design, as well as a few new features, including a reading mode, a reading list, web notes and a share function. These functions can be accessed through the various symbols in the browser tab, which can be found in the upper right portion of the screen. Cortana has also been integrated into the browser. If you mark a certain term on a website, you can right-click it to pull up the respective information through the assistant.

## Improve Readability with Edge's New Features

If the book-symbol in the browser tab starts turning its pages when you're visiting a website, you can click it to switch over to the reading mode. This special layout is particularly well-suited for reading longer texts; it removes all the distracting elements from the website, such as navigation menus, sidebars and advertisements. This just leaves the titles, images and text of an article. In order to make it easier to read for a long time, the contents are placed on top of a cream-coloured background.

If you want to read an article later, you can put it in the reading list. To do so, click the icon with the star, and then click the stylised pile of newspapers. You can use the favourite-star that is next to the reading list symbol to add the website to your list of favourites. The favourites and the saved reading list can be called up through a 'hub', which can be accessed through the line-symbol in the browser tab. The sub-menu contains the favourites, the reading list, the browser history and the list of downloads.

One feature that sets Edge apart from all the other browsers is the web notes function. This function allows you to make permanent markings on websites and add your own comments and edits. The web notes function can be activated through the paper-and-pencil symbol, which is right next to the hub icon. If the feature is active, the upper right portion of the screen will contain the pencil, text marker, eraser, annotation and cutting tools. You can use the pencil to leave free-hand drawings on a website, and the drawings can feature various colours and thicknesses. If you select the annotation option and click a certain location in a website, a comment window will pop up at this location. The diskette field in the upper right portion of the screen lets you save the edited website in the list of favourites, the reading list or OneNote. However, you will only be able to use OneNote if you have a Microsoft account. The symbol with the three loops that are joined by a circle can be used to share the edited site with other users.

## INFO

### This is how the successor to Internet Explorer works

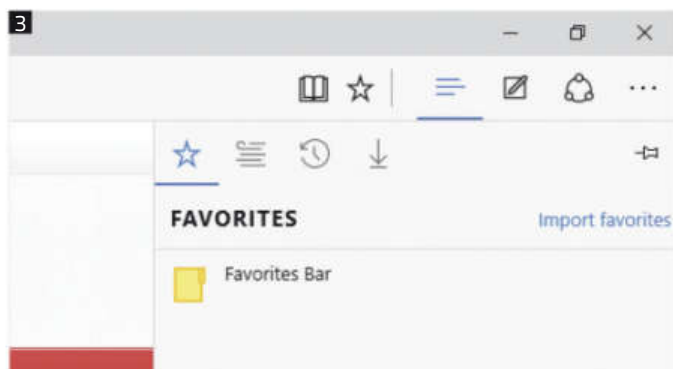
In addition to new features, Microsoft's new Edge browser also has a new design.



Edge's options and settings can be found behind the three points in the upper right corner



When the reading mode is activated, the browser gets rid of all the elements of a website that are not part of the article



The so-called hub lets you access the favourites, reading list, browser history and downloads



The web notes features lets you tag websites with comments and share them



# Introducing The Reworked Start Menu

The Start menu in Windows 10 combines elements from both Windows 7 and Windows 8. Shortcuts for frequently-used programs, folders and settings are there alongside the live tiles

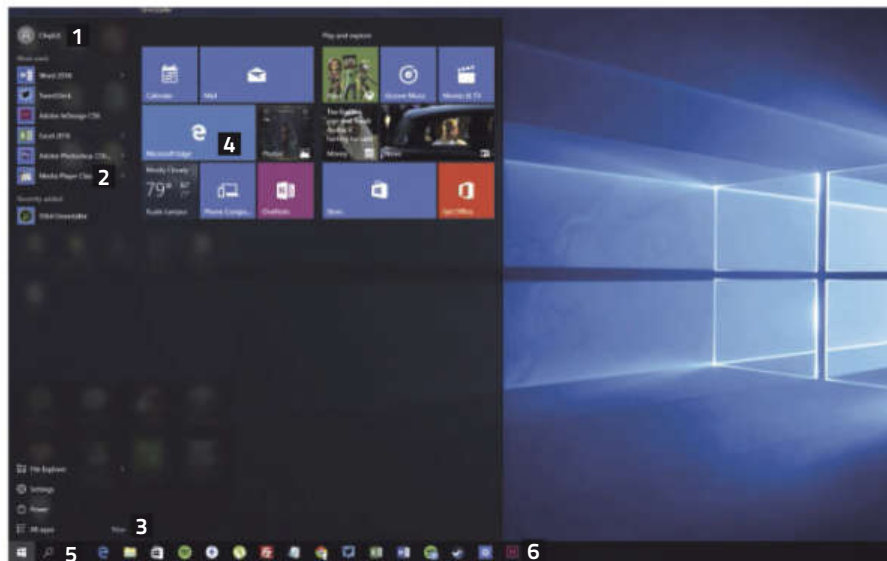
## 1 User account

Click the account symbol to log off or lock the PC



## 2 Jump table

The arrow for the Explorer link provides access to the most important folders



5 Cortana

6 Edge

## 3 App menu

The programmes in >>All apps<< can be attached to the start menu with a right-click



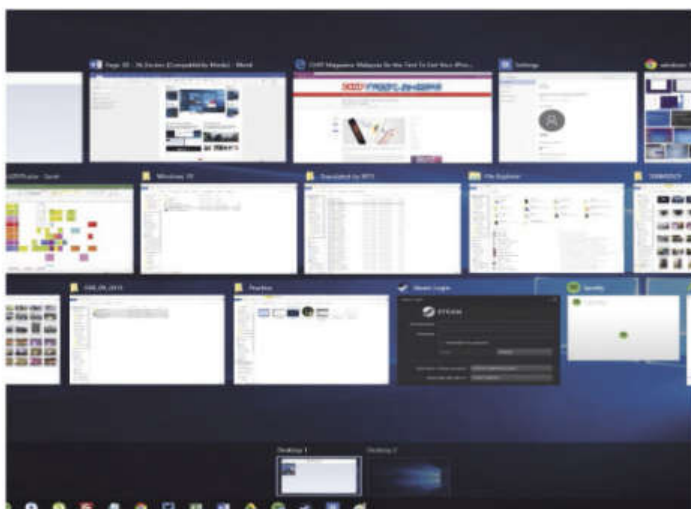
## 4 Tile menu

The size of a tile in the start menu can be changed with a right-click



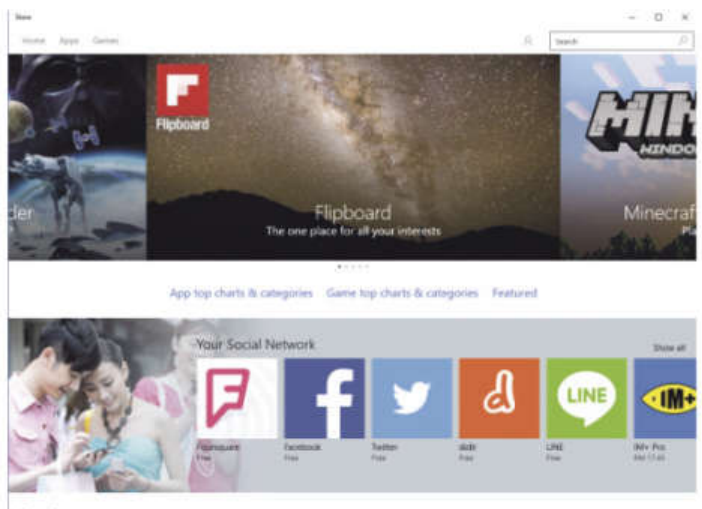
## Built-in Virtual Desktops

Windows finally has its own version of virtual desktops, without having to rely on third party software anymore. To access the virtual desktops, simply press on the icon on the taskbar next to the Cortana search bar, or use the Winkey+Tab keyboard shortcut.



## The New Windows Store

The Windows Store doesn't just provide apps and games that are optimised for the full-screen mode – From Windows 10 onwards, it will also let you purchase movies, serials and music.



## INFO


# Smartphones and Tablets

Operating system incompatibility is now a thing of the past, thanks to Windows 10. It will soon run on mobile devices as well, the only difference being the way it looks, depending on the screen size

Microsoft has designed Windows 10 in such a way that various operating system components – such as the start menu and the integrated apps – can be operated independently of the core operating system. It also runs on different devices such as PCs, smartphones and tablets.

## Continuum For Tablets with Keyboards

The start menu is not used in smartphones. On such devices, the start menu is replaced with the tile-based user interface that was used in the Windows Phone 8.1. However, it is a little different when it comes to tablets: On such devices, the start menu can be activated or deactivated using the Continuum function. A tablet that does not have a keyboard displays a screen-filling tile-based user interface. As soon as a keyboard is attached, the user can, if he so desires, switch over to the classic desktop mode that has the start menu. The system also provides the option of letting this happen automatically.

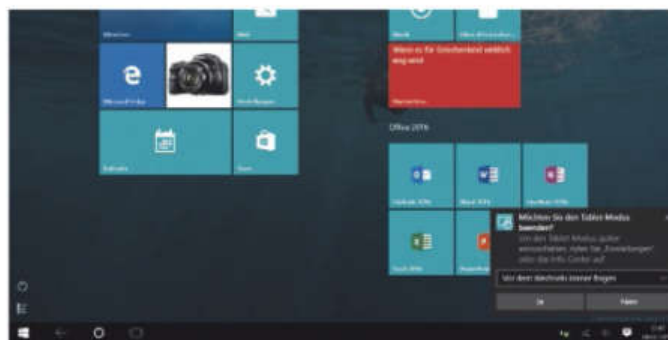
The WiFi-Sense feature is quite useful for smartphones and tablets. It allows the user to share access to a WLAN with his contacts. In such a case, the contacts will no longer have to enter any network passwords. The 'WLAN optimization' option (which can be found under the 'WLAN' point in the network settings) lets you specify whether you want to share the networks with your Outlook, Skype or Facebook contacts. 

## Mobile devices: Tiles or the start menu

Windows 10 adjusts its appearance vis-à-vis the device on which it is running, but the operating system is the same in each case.



The home screen for smartphones is strongly similar to that of Windows Phone 8, but the settings feature the Windows 10 look



The function that facilitates automatic switching between the desktop and the tile view in case of tablets with keypads is called continuum

## INFO

# Features Dropped In Windows 10

Although Windows 10 has all kinds of new features, it does omit a few functions. We take a look at some of these left-out features, and some of the alternatives that you can use to replace them.

The Windows Media Centre, which was in some versions of Windows 7 and 8, has not been included in Windows 10. You will have to use alternative programs like the open-source Plex media centre to stream music, photos and videos onto other devices.

Windows 10 cannot play DVDs and blu-rays with

its on-board tools, since Microsoft no longer integrates the required codecs into the operating system. If you try to play a DVD with Windows 10, you will be asked to download a DVD app from the Store.

VLC media player is an open-source tool that is capable of playing all the popular formats. After the player has been installed, you can configure it as a standard app after a DVD has been inserted into the device.

What's more serious than the absence of the apps is the access that Microsoft has to the

Windows updates. In the future, you will not be able to choose between optional and mandatory updates. In Windows 10, all updates will be mandatory.

Furthermore, when you upgrade to Windows 10, it will remove all the anti-virus programs whose licences have expired and replace them with the Windows Defender. This primarily affects expired test versions of the software. Anti-virus programmes whose subscriptions are still valid are updated to the newest version during the upgrade process.

dimension  
data



# The Importance of Enterprise Security

*We sit down with Guido Crucq, General Manager, Security Business Unit, Dimension Data Asia-Pacific on the importance of Enterprise Security* By Nazrin Zain

**W**ith companies continue to grow in terms of capacity and infrastructure, it's quite common to see the higher ups trying to cut expenditure on things that aren't deemed necessary. In some cases, IT security is often neglected, and companies learn the hard way that a bad security infrastructure can lead to more losses than bad sales.

Recently, we sat down with Guido Crucq, General Manager, Security Business Unit, Dimension Data Asia-Pacific to talk about the importance of enterprise security, and what necessary measures companies need to take to ensure that their businesses are not affected by malicious hackers.

**Despite advancements in security technology for mobile devices, hackers continue to attack end user devices with seemingly high levels of success rate. Is there any particular reason why**

## this is happening?

There are couple of reason over here, if to list down

1. Hacker attack non IT end users where most of them lack of security awareness and knowledge.
  2. Free WiFi is still the main reason for people to hangout in coffee shop
  3. Jail broken mobile device
- With that end user is a soft spot for hackers to target on.

**Across mobile operating systems such as Android, iOS, Windows Phone and BlackBerry, which devices are most likely to be hit by cyber-attacks?**

Android still dominate the market share for mobile device and will obviously be the most targeted.



**How do companies tackle the issue of keeping BYOD devices secure whenever the employees bring them back home over the weekend, so that they don't inadvertently bring infected devices into the office network?**

Companies need to educate the users and increase awareness of cyber security follow by security investment around end users computing/mobile device.

**Whilst attacks against company servers have not gained much traction, it is not due to a lack of trying as the banking industry, for example continues to be one of the most targeted sector, with the business sector also seeing a marked increase in attacks. What measures are these companies taking to make sure that their critical systems aren't compromised?**

We believe that incident will happen, how do we deal it it will be the differentiator.

In today threat landscape we need to be proactive meaning we must have a capability to continues monitor the network, find the suspicious activity within and contain as fast as possible.

**In the Dimension Data report, it is also estimated that 56 percent of the attacks against NTT's global client base originated from the US, although it is also mentioned that it is likely that the hackers themselves do not reside there. Could you tell us more about this?**

This is possible due to many Proxy or VPN services that reside or hosted in US. Using the proxy or VPN services is the easiest way to cover the original source.


**DDoS attacks continue to be the weapon of choice for hackers to hammer against company servers and systems. What other forms of attacks are used to get the hackers access to the company's information?**

Through the user, social engineering and combine with spear phishing still the best way to plant a malware into corporate network. End user is the new security parameter.

**A huge percentage of the vulnerabilities spotted throughout the systems ranged from more than two years old, and a smaller percentage being at least 10 years old. Are some of these vulnerabilities more difficult for companies to determine, or has there been a lack in enforcing security measures by the companies?**

Most company enforce and focus the security investment only in the network and servers, where the critical system reside. That will be one of the reason that we still see vulnerabilities that reside at end users system, companies need to start enforcing security at users level.

**Threat intelligence and Advanced Persistence Threats (APT) seem to be security buzzwords that have been around for several years now. Are companies today more adept at handling APT attacks, and how does threat intelligence differ from that of APTs?**

Most of companies still don't have adequate skillset in handling APT attacks, even they have best technology in place it still depends to the people skillset that operate it. APT attack intention is to steal data and be undetectable for as long as possible this attack didn't cause any damage in network or system. The only way to detect it is by the malware behaviour. Threat intelligence provide that behaviour insight for security administrator to take action and remediate the threat. Dimension Data with its Manage Security Services provide a Real-time Threat Management service. With ability to see about 40% of Internet traffic, it's a big advantage for our security analytic team to determine an APT attack. 

[www.dimensiondata.com](http://www.dimensiondata.com)





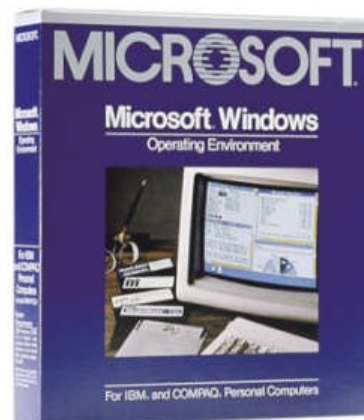
## Bill Gates started with MS-DOS

Sales: Summer 1982

First released as: PC-DOS, 1981

Predecessor: QDOS (Quick & Dirty OS)

Platform: IBM PC



1985

Windows 1.0

After a delay of almost two years, the first version of Windows appeared on 20 November

1982 1983 1984 1985 1986 1987 1988 1989

# CHIP TIMELINE

## From 1 To 10: Thirty Years Of Windows

*For three decades, Microsoft has been supplying PCs with its Windows operating system. In this article, we take a look at the operating system's highs and lows, and an overview of its history*

For three decades, Microsoft has been supplying PCs with its Windows operating system. In this article, we take a look at the operating system's highs and lows, and an overview of its history.

20th November 2015 is a date to be cherished by Microsoft and its employees, as it is the date of its Windows operating system's 30th birthday. Without a doubt, it is

the most successful operating system of all time. Its immense success is based on a decisive deal that was concluded by Bill Gates in the year 1980. As a service provider, Microsoft at the time was assigned the task of providing an operating system for the IBM PC. Instead of allowing itself to be paid off in the form of a one-time payment, Microsoft held on to the right to sell the operating

system under its own name. The name of the operating system? MS-DOS, which stands for Microsoft Disk Operating System.

However, the purely text-based operating system was not exactly mainstream – The successor was supposed to change this. A graphical user interface for MS-DOS was hidden away under the name 'Interface Manager', which was later re-named

## Windows as a Service

Software such as Office 365 now are sold as subscription-based services rather than a one-off software key



## 2000

### Windows 2000

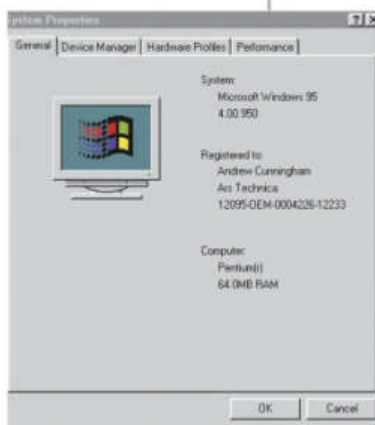
Windows 2000 emerged instead of Windows NT 5.0, and laid the foundation for subsequent consumer versions

## 2014

### Satya Nadella

Nadella succeeds Steve Ballmer as the CEO of Microsoft, and adopts a radically new course

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015



## 1995

### Windows 95

Microsoft adds the start button, the 32-bit mode and Plug&Play

## 2001

### Windows XP

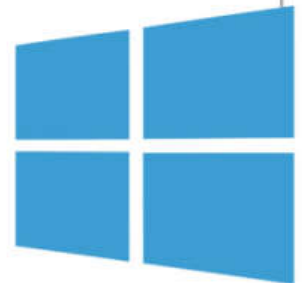
The most popular Windows version is persistently holding on to life, e.g. in the Bundestag



## 2015

### Windows 10

Success at any price: In 2018, Windows 10 should be running on a billion devices



'Windows'. Windows 1.0 came out in the year 1985, which came with the game 'Reverse', in order to playfully acquaint its users with new mouse-based operations. DOS was the foundation of Windows 1.0, which didn't change in subsequent versions. All the consumer versions up to and including Windows ME were based on the old 16-bit system.


From Microsoft's point of view, the company's second collaboration with IBM was less successful: The co-developed OS/2 was a flop, after which Microsoft started developing Windows New Technology, or NT. For a few years, DOS and NT variants of Windows were released in parallel with the NT versions released for companies.

Windows 2000 was supposed to inject a dose of clarity into the proceedings at the turn of the millennium: It unified the Windows 9x line (Windows 95, Windows 98, Windows ME) with the NT line, which became the foundation for all the subsequent versions of Windows.

Windows XP finally did away with the strict separation into business and consumer systems. Instead, Home and Professional editions – which featured a different range of functions – have been available since launch. A version for 64-bit processors also appeared for the first time.

Windows 10 represented Microsoft's most recent coup, as well as the expression of a new style of leadership. According to

Microsoft, Windows 10 isn't a pure successor to Windows 8.1, but has been newly developed to a large extent. The new developments include the kernel, which runs in an identical form on all devices – PCs, tablets and smartphones.

Another first: Only a few users will have to pay for an upgrade to Windows 10; free licences will also be available for PC manufacturers. In order to ensure that the new system becomes widely-used, Microsoft is going to be prepared to sacrifice a large chunk of the sales revenues during the first year of Windows 10. The stated goal: Windows 10 should be running on a total of a billion computers worldwide by the year 2018. 



# Google Locations

Google is the most popular search engine in the world, a smartphone manufacturer and one of the most influential companies ever. For a long time now, the mega-company has distributed its developers across the globe and has been manufacturing different products at different locations. The headquarters, popularly known as Googleplex, is located in Mountain View in California. Spread across almost 288,000 square metres, this is also the largest of all Google buildings. The front garden with sculptures of the figures of all Android versions from Base and Cupcake to Lollipop has become a small tourist attraction of Mountain View.

YouTube's offices meanwhile are located in San Bruno, California, which is not far from the Googleplex. This Google subsidiary, which was bought over in 2006, has its office equipped with a big, private swimming

pool and a mini golf course. In its offices in San Francisco, the company develops new features for Gmail and Google's own browser Chrome amongst other things. This city on the shore of the Pacific is also the venue of the annual Developer Conference I/O. Colleagues in New York work on Google Drive, Maps and other Cloud services. The tests of Google's self-driving cars are now carried out on the streets of Austin, Texas in addition to Nevada and Mountain View. Google employees still sit at the steering wheel in the upgraded Lexus RX for safety purposes.



## Google in Europe

Google has its branch offices in Europe too. While it focuses on developing and testing technology in USA, the company focuses more strongly on marketing and design development in this region.

### Hamburg

Hamburg houses Google's largest office in Germany. More than 250 employees work here on Adwords and marketing strategies, amongst other things.

### Berlin

The office in Berlin is a representative office of Google in Germany. The team here functions as the interface between media, politics and associations.

### Munich

More than 80 developers work in the Munich office of Google on new designs or features for the Chrome browser, including others.

### London

This is one of the largest Google offices in the UK. It is responsible for the development of Android, AdSense and other solutions.

### Zurich

The office in Switzerland is the largest Google office in the whole of Europe. The employees here work on services such as Maps, Calendar, YouTube and Gmail.

## You Tube

### San Bruno

Head office for the video portal YouTube. In 2006, Google took over this company a year after it was founded.



## San Francisco

Development of Gmail and Google Chrome, also the location for Google's largest developer conference, I/O at the Moscone Centre.



## Council Bluffs, Iowa

One of Google's data centres which works on current from wind parks. This data centre is spread across 10,000 square metres.

## Stanford University

Google poaches the most qualified graduates from this private university for its developer teams.



## Austin, Texas

New experiment area for Google's self-driving cars. There have been only 12 small accidents since the Google Car testing started.



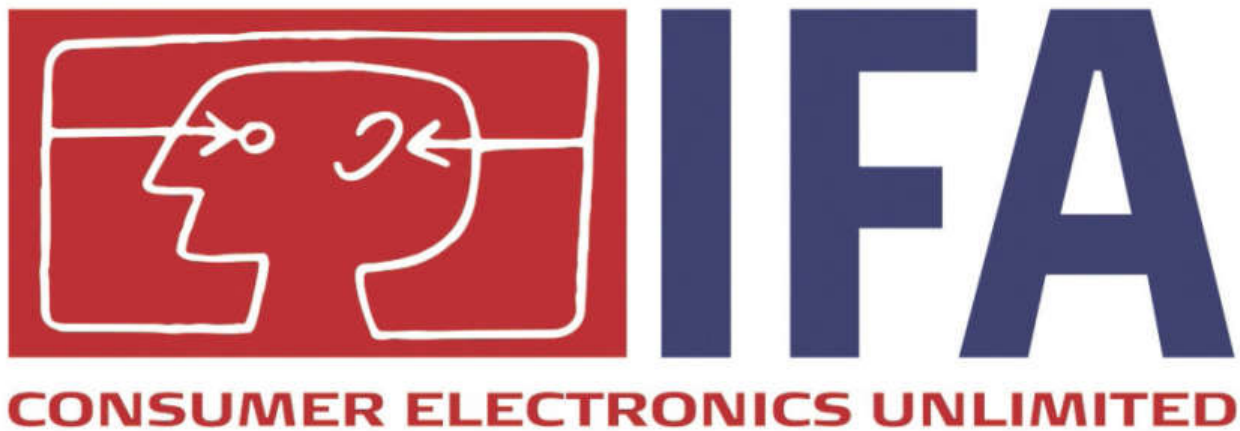
## New York

Second largest developer office for Google after the Googleplex. Houses Creative Labs for Google Maps, Drive and Cloud.



## Mountain View

Global headquarters of Google, called the Googleplex. Teams develop new OS updates and houses the development teams for all of Google's products here.



# IFA 2015

*Smartphones, tablets, PCs and wearables. Those aren't the only things on show at IFA this year. In this article, we take a look at some of the more interesting products on show*

*By Team CHIP*

IFA 2015 may be the last biggest trade show of the year, but it is in no way a boring one. Manufacturers from all over the world are looking to rally for a final push of products, and based on what we have seen, they did not disappoint. Products ranging from desktop PCs, gaming laptops, smartwatches, cameras and even toy robots are on show in Berlin this year, with many of them slated to launch soon after the event itself.



## Desktops

## Acer Predator G6

Acer is really raring this time around to get into the gaming groove, establishing that their Predator line of products are meant for gaming through and through. The Predator G6 is a desktop built for 4K gaming, with the latest hardware that is sure to provide an amazing gaming experience. Featuring an Intel Core i7-6700k processor and NVIDIA GeForce GTX980 together with 64GB of DDR4 RAM. Housed within a case that exudes power, the Predator G6 features beautiful lighting and airflow control dubbed "IceTunnel", which is the G6's cooling system where multiple air intake zones on the front and left sides create a powerful airflow to push out hot internal air.



## Acer Revo Build M1-601

Acer also announced the Acer Revo Build M1-601 a super-small form factor modular desktop that can be expanded and customised using stackable blocks. Like a tower of Jenga or Uno Stacko, whenever you need to add additional components such as maybe a hard drive for additional space, all you have to do is pop it on top of each other. The blocks are connected by magnetic couplings and pogo pins growing your M1-601 with each new additional block. It is powered by your choice of either an Intel Pentium or Celeron processor and up to 8GB of DDR4 RAM.



## Lenovo ThinkCentre M900 Tiny

The ThinkCentre M900 Tiny is an ultra-small form factor desktop starting at 0.6kg with dimensions of 179 x 183 x 34.5mm, which probably is the world's most powerful desktop per cubic inch as of today. Equipped with the latest sixth-generation Intel Core i-series processor and an optional PCI-e SSD, it's a huge improvement over its predecessor. Although small, the M900 Tiny is capable of supporting up to 3 monitors using the video outputs VGA, HDMI and DisplayPort. Not only that, the M900 Tiny has six USB 3.0 ports which is an ample amount especially on such a small form factor and supports fast charging.

## Laptops

**Acer Predator 17**

The Acer Predator 17 features Intel sixth-generation Intel Core i7 processors, a NVIDIA GeForce GTX 980M and 17-inch screens, capable of up to 4K resolutions and supports NVIDIA GeForce G-SYNC. The laptop features 'Dust Defender' which are a set of fans with alternating airflow directions to prevent dust from settling reducing dust build-up within the laptop and keeps components running smoothly. Another thing we found hard not to mention is their Predator FrostCore addition that can be swapped with the DVD drive to provide additional cooling during gaming. To further enhance your gaming experience, the Predator 17 has 4 speakers and 2 subwoofers together with Dolby Audio for an immersive audio experience.

**Toshiba Satellite Radius 12**

The Toshiba Satellite Radius 12 is an ultra-portable laptop with a high resolution display. It has a 12.5-inch IPS panel which is capable of going up to 4K resolutions and is protected by Corning's Gorilla Glass. The laptop is equipped with sixth-generation Intel Core Skylake processors and up to 8GB of RAM. It is capable of rotating into different positions depending on usage, so you can use it as either a laptop or a tablet. It also features a USB Type-C port and two regular USB ports along with HDMI output.

**Lenovo ThinkPad YOGA 460**

Lenovo isn't one to slack, and has a massive range of products prepared to be introduced to the world. The ThinkPad YOGA 460 is capable of rotating its display by using Lenovo's signature 360-degree hinges, which can rotate from a closed position to a fully open tablet. The YOGA 460 is powered by the latest sixth-generation Intel Core Skylake processors to provide the best performance possible while maintaining its flexibility. Furthermore, the laptop features a 14-inch Full HD (1920x1080) IPS display which can be upgraded to WQHD (2560x1440). It also has 3x USB 3.0 ports, a mini DisplayPort, HDMI and a 4-in-1 Media Card Slot.

**ASUS ROG GX700**

This time round, ASUS introduced the ROG GX700 the first laptop ever to benefit from water-cooling. Thanks to this, ASUS is able to push their laptops even harder than before. The GX700 comes with an Intel Core i7 Skylake processor said to be an i7-6820HK with a base clock of 2.7GHz and turbo boost clock of 3.6GHz. For its discrete graphic card not much is known about it except it's a never before seen unreleased card which requires the water-cooling dock to unleash its full potential. Not much else is known yet about this laptop, and we sure can't wait to find out more.

## Audio



### Panasonic Ottawa Premium Class C500 HiFi System

Panasonic Technics is making a comeback with their Panasonic Ottawa Premium Class C500, a combination of a premium CD Stereo Amplifier and OTTAVA speakers for high-resolution audio playback. Technics, with their years of experience integrates breakthrough technology such as the JENO Engine, LAPC and Battery Driven Clock Generator into the OTTAVA SU-C501. Combining that with the OTTAVA speaker system that has two woofers arranged symmetrically to reduce cabinet vibrations and a spiral acoustic port design that produces powerful yet non-overwhelming bass. You can use CD, flash drives and even smartphones to play your music. It doesn't stop there as it also allows you to stream music through a USB-DAC.

### Panasonic EAH-T700

Panasonic is well known for their audio contributions and many other electronic products that have gained positive responses from the masses. At IFA 2015 they have decided to unveil their latest over ear closed-type audiophile headphone, the Panasonic EAH-T700. The headphone uses 50mm drivers to provide mids and lows while a 14mm Super Tweeter provides the highs needed to get that high fidelity sound. In addition, the EAH-T700 features Panasonic's Angled-Driver System to deliver clean and accurate audio. The EAH-T700 is perfect even when you're on-the-go. Its stylish design and Anti-Vibration Frame, together with its Floating Dynamic Driver reduces unwanted vibrations when moving to retain audio perfection.



### Samsung R1, R3, R5

Samsung released three new wireless speakers, the Samsung R1, R3 and R5 360-degree speakers. Using a ring-radiator technology, the 360-degree wireless speakers are able to fill a room with sound easily. The speakers can be controlled through Android and iOS devices through the Multiroom app or by smartwatches like the Samsung Gear S2. Besides mobile devices, the speaker is also controlled by an almost transparent physical interface on top of the speakers, which is touch-sensitive by tapping or swiping. You can share music through WiFi connected devices, allowing you to fill your house with the sound of music.

### Bang & Olufsen Beoplay A6

Every product that Bang & Olufsen has designed exudes luxury and is always aesthetically pleasing. The B&O Beoplay A6 is not an exception to that, with its unique curving shape that supposedly enables the Beoplay A6 to fill an entire room with sound. It is wrapped in a wool-blend manufactured by Kvadrat so not only does it look amazing, it becomes a part of your home fitting in with your furniture. The Beoplay A6 can be controlled through Bluetooth or by tapping and swiping. Connect over WiFi, Airplay, DLNA and Bluetooth 4.0 to share all your music in a matter of seconds.





## Phone/Tablets

**Acer Predator 8 Tablet**

Acer has really taken gaming seriously, but this time for mobile gaming with the Acer Predator 8 Tablet. A tablet built and designed for serious mobile gaming in mind, using an Intel Atom x7 processor and 2GB of RAM. The Intel Atom x7 will use its integrated Intel HD Graphics when gaming, clocking in a base clock of 200MHz but boosts up to 600MHz during graphically intensive tasks which should be enough for any mobile game. The Predator 8 sports an 8-inch Full HD screen that displays up to a resolution of 1900x1200, and 4 speakers on each corner of the tablet. With a slew of other features designed for gaming, the Acer Predator 8 Tablet is definitely one mean gaming machine.

**Lenovo YOGA Tab 3 Pro**

The Lenovo YOGA Tab 3 Pro might just be the definitive video tablet, bringing a projector together with a tablet that transforms your room into a home theatre. The display is a 10.1-inch QHD screen at 299 pixels per inch and the projector is capable of projecting a 70-inch screen. For an unforgettable audio experience, Lenovo has integrated a front-facing soundbar that houses 4 premium JBL speakers together with Dolby Atmos to deliver an immersive and surround sound experience. The YOGA Tab 3 Pro uses a quad-core Intel Atom x5-Z8500 processor and 2GB of RAM with up to 32GB of internal storage which is expandable with the microSD slot and runs on Android 5.1.

**LG G Pad II 10.1**

There hasn't been much noise from the LG side, but that doesn't mean LG isn't doing anything. LG introduced their LG G Pad II 10.1. The 10.1-inch screen displays at a resolution of 1200x1920 and has 224ppi. Powered by a Qualcomm Snapdragon 800 clocked in at 2.26GHz on 4 cores and 2GB of RAM. The G Pad II 10.1 will have an internal storage of 16GB but is expandable through its microSD slot. The tablet has 5MP rear camera but doesn't have flash so adequate lighting is required for taking photos and a 2MP front camera.

**Huawei Mate S**

Huawei introduces their replacement of the Ascend Mate 7 with the Huawei Mate S, their latest flagship phone. The smartphone sports a 5.5-inch Full HD AMOLED display and with certain variations of the Mate S supporting Force Touch technology, which allows the phone to know how much pressure is used when using the touchscreen. It has a 13MP back camera with OIS, RGBW and dual-tone flash, together with an 8MP front camera with soft light. The phone is powered by a Kirin 935 octa-core processor and 3GB of RAM providing a smooth and lag-free experience. Internal storage is 32GB large and is expandable through the microSD card slot, whilst everything is kept alive by the 2,700mAh irremovable battery.

**Sony Xperia Z5**

Sony is releasing a new line of Xperia phones, the Xperia Z5 alongside two other variants, the Xperia Z5 Compact and Xperia Z5 Premium. All three phones will house the Qualcomm Snapdragon 810 chip as their processor and equipped with 3GB of RAM except for the Compact variant which will only have 2GB of RAM. Sony has opted to use a 5.2-inch Full HD display for the Z5 and runs Android 5.1. The phone features a powerful 23MP camera with Hybrid Autofocus that combined contrast-detection and phase-detection for an unparalleled incredibly fast auto-focus. Another feature that should be mentioned is the fingerprint sensor which is merged together with the power button.



## Monitor/Projector

### Acer Predator Z35

The Predator Z35 is the first of Acer's Predator Z Series of curved gaming monitors that support NVIDIA G-SYNC. It's a 35-inch 21:9 UltraWide Full HD panel that has a curvature of 2000R. The monitor has a base refresh rate of 144Hz but can be overclocked to 200Hz if you ever need to. Not only that, the monitor has built-in speakers with DTS sound and supports DisplayPort and HDMI. It also has a USB 3.0 hub which feature 4 ports, one on top and 3 at the bottom. In addition, it features NVIDIA's Ultra Low Motion Blur (ULMB) technology that reduces motion blur for smooth and sharp movements, even at high refresh rates.



### Sony Life Space UX 4K Ultra Short Throw Projector

The Life Space UX concept is something that Sony has been pushing for a while now, the idea is to surround your environment or home with technology. In line with their theme, Sony has been churning out products that helps one get closer to what a smart home feels like. One of the most beautiful piece of technology is Sony's Life Space UX 4K Ultra Short Throw Projector that just looks gorgeous in almost any home setting. Able to project a 66 to 147-inch image to the wall at 4K resolutions using SXRD panels to suit your wall space. The projector also uses a laser light source composed of Blue Laser Diodes.



## Mouse



### Razer Orochi

Razer isn't going to be left out with their re-launch of the Razer Orochi, built for the mobile gamers in mind, it is a small and compact mouse perfect to be used on-the-go with your laptop. Sporting one of the most accurate sensors for playing games it would be silly not to bring back this unique accessory. The new Razer Orochi has an upgraded sensor (8,200 DPI) and battery that boasts twice the battery life of its predecessor, and has the added Razer Chroma backlight for customisation purposes. Though the Orochi now uses Bluetooth LE to connect to your computer and requires two AA batteries.



### Razer Diamondback

The Razer Diamondback is also making an appearance once again, being the first gaming mouse to feature an optical sensor. But now the Diamondback is coming back with a 16,000 DPI laser sensor and ambidextrous design, which handles up to 210 inches per second with 50g of acceleration. Like most Razer mice, the Diamondback DPI settings can be adjusted at 1 DPI at a time through Razer's Synapse software. Also making an appearance is Razer's Chroma lighting, and nine programmable buttons, that gives you a variety of ways to customise the Diamondback until it becomes 'your' mouse.

## Cameras

### Sony Cybershot RX-100 MkIV

The Sony Cybershot RX-100MkIV is the Japanese tech giant's latest addition to its powerful compact point-and-shoot series. Featuring Sony's new 20MP EXMOR RS CMOS sensor, the camera is essentially a prosumer grade camera in a point and shoot form factor, with an aperture count of f1.8, and an optical zoom of 2.9x. Looking to do more than just photos? You're in luck then as the camera is also capable of recording 4K videos, although it only does so a few minutes at a time.



### Sony A7R II

The camera many people have been looking forward to. The successor to the critically-acclaimed Sony A7R is chockfull of new specs and features. It's the first 35mm rear-illuminated full-frame sensor, with a pixel count of approximately 42.4MP. This is backed by Sony's own 5-axis image stabilisation function and a fast Hybrid autofocus system that ensures you get the sharpest photos and videos a camera is able to capture. For 4K video enthusiasts, you'll also be happy to know that the A7R II does indeed capture 4K videos, and does so without pixel-binning in the Super 35mm format.



### Polaroid Snap

Polaroid cameras have always been a big hit with many age groups, but one thing that hasn't changed much over the years is how big and bulky they can be. Polaroid looks to change that as they introduce the Polaroid Snap, a more compact version of the popular snap and print camera. Besides taking standard Polaroid print shots, the Snap also has a microSD card slot on it, which allows you to save a 10MP digital copy of the photo that you took.



### Ricoh Theta S

360 degree cameras aren't exactly ground-breaking concepts, but Ricoh have built an interesting camera around that same concept with the Ricoh Theta S. The camera records image stills and videos up to 1080p in resolution, and that's not all. With the Theta S, you can also stream your recordings live on the Internet, with its 8GB of storage space allowing you to record videos up to 65 minutes in length. The camera is also compact enough that you can just slide it in your pocket, and just take it out when you need it. Perfect for people who often do things like livestreaming in open spaces.



## Watches

**Moto 360**

The new Moto 360 features some subtle differences compared to the first generation smartwatch. For starters, the Moto 360 now comes in a number of sizes, including 46 and 42mm models, made for both men and women. The differentiating factor between these male and female models, besides the size are the straps. The variety here range from thick rubber straps to thin leather ones, with Motorola allowing you to choose whichever catches your fancy. The display has also seen marked improvements in the pixel numbers, and now has a built-in pedometer that properly counts your steps, which is great for fitness-related activities.

**Huawei Watch**

Right on the heels of Motorola's classy smartwatch revolution is Huawei. Similar in design to the Moto 360, the Huawei Watch also sports a very traditional circular design, the only difference being that Huawei's options come in the form of build quality. The cheapest model nets you a steel chassis with a black leather strap, whereas at the other end of the spectrum is that same device, but built using rose gold instead. The Huawei Watch runs Android 5.1, sporting a 2-day battery life, powered by a Qualcomm Snapdragon 400 processor.

**Samsung Gear S2**

Samsung isn't giving up on their search for the perfect smartwatch yet, and it's a good thing they haven't. Unlike the rest of the smartwatches in our IFA list, Samsung decided to go with its own proprietary Tizen operating system, although that being said, it seems that the new smartwatch still keeps that old habit of being compatible with only Samsung smartphones for now. Interestingly instead of just using the touchscreen as an input device, the bezel can also be rotated, typically used to cycle between background apps that may be open.

**ASUS ZenWatch 2**

ASUS is probably the only company out there right now who is making affordable smartwatches besides Pebble. The ZenWatch was a crowd favourite thanks to its competitive pricing, and the ZenWatch 2 is more or less the same. The new model sports a 1.63 inch 320x320 display, eschewing the circular design which is all the rage right now with smartwatch makers. Much like the Moto 360, it comes in a variety of sizes, and has a decent enough battery life, although some may not like how thick the watchface itself has become now.



## Television



### Sony X90C

It's now Sony's turn to jump aboard the Android TV hype train. Whilst it is certainly packed full of features such as native 4K support and Android operating system baked in into it, perhaps the first thing that you'll notice about it is how thin it is. It's perhaps not an exaggeration to say that the Sony X90C is the thinnest television to be built yet, with its display measuring in at just 4.9mm in thickness. Sony's 4K Processor X1 chip is to thank for the TV's stunning image quality, and with Android running as the operating system, you can directly access the Play Store to download movies and such without the hassle of having to have your phone beside you.



### Sony S85C

Better late than never, as they say. Sony might be several months (or even years) late to the curved display party, but we're glad that they took their time with it, because the Sony S85C curved UHD TV is simply stunning. Featuring the same 4K Processor X1 that's used in the Sony X90C, the S85C's curved display adds an extra dimension of viewing experience, providing rich colour from any angle you may be sitting at, making an entire seating area the sweet spot to watch and enjoy movie binges.

### Philips Ambilux

With so many TV manufacturers rolling out 4K televisions like it's the next big innovation in the visual entertainment business, how does one stand out from the crowd? Philips seems to think it's to add backlight to your television unit. We're not kidding. Philips announced its Philips Ambilux UHD TV at IFA this year, and what it does is it essentially takes whatever the display is currently outputting, and adjusts the backlighting on the TV to match it. That's not all of course, as Philips also made sure that you get more screen out of the display real estate, making sure that the Ambilux's bezels are as thin as humanly possible.



## Others



## PlayStation VR

Project Morpheus was first unveiled by Sony a couple of years ago as the Japanese tech giant's foray into the virtual reality market. After being in beta for so long, it appears that Sony has been hard at work finalising the design, making it properly work before unveiling it at IFA as PlayStation VR. Unfortunately, there doesn't seem to be that many details about the product as of yet, besides the fact that it works with Sony's PlayStation 4 console.

## ASUS VivoStick

Stick PCs are quite in vogue these days, with companies like Intel and Google pushing out these ultra-compact compute sticks that can fit into your pocket. ASUS is no stranger to going with the flow when it comes to such innovations, and have introduced its own offering to this still-niche market. The VivoStick is a computer powered by an Intel Cherry Trail processor, running Windows with 2GBs of RAM and 32GBs of storage space, alongside two USB ports and a headphone jack. Don't ask us how they managed to cram all that into something no bigger than a pack of mints. We'd just chalk it down to magic.



## Sphero BB-8

What is the Sphero BB-8 you ask? If you've watched the new Star Wars: Force Awakens trailer, no doubt you'd have seen this white and orange-coloured robot in it. Its name is the BB-8, and Sphero, a company that specialises in making spherical robots has recently unleashed it as an actual robot that can be activated by your smartphone! The BB-8's interactions are all purely just for show, but it should elicit a few 'Oohs' and 'Aahs' the next time your friends and family come around.

## LG The Rolly Keyboard

Looking for a portable Bluetooth keyboard that's not a slate device, and doesn't take up too much of your precious luggage space? LG may have just the thing for you with its LG Rolly keyboard. As its name implies, the Rolly keyboards rolls up when not being used, saving you some much needed space for more important things such as press releases and documents that you can't fold. What's more, the Rolly keyboard runs on a single AAA battery, and will last you up to about three months without the need for a charge. 🇨🇦





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# TEST LAB: The Tools

Here at the CHIP Test Labs, we adhere to the high requirements set by the CHIP International Testcenter standards. This means that everything here -- from our own personal knowledge and to our trusted tools of the trade -- are meant to provide the most optimised, unbiased and comprehensive review to every product that comes through our doors. As thus, our test bed tools are specifically picked to get the most out of every test we perform



## Intel Platform

### Motherboards

Intel DZ77GA-70K  
MSI Z87 MPower

### Processors

Intel Core i7-3770K  
Intel Core i7-4770K

### Graphics Processing Unit

MSI GeForce GTX 980  
GAMING 4G

### CPU Cooler

Master X6



## AMD Platform

### Motherboards

ASUS Crosshair V  
ASUS A88X-Pro

### Processors

AMD FX-8150  
AMD A8-3850

### Graphics Processing Unit

ASUS Radeon R9 290X

### CPU Cooler

Cooler Master Hyper 212  
EVO



## PSU, Storage & RAM

### Power Supply

Cooler Master Silent Pro  
Hybrid (1300W)

### Storage

Western Digital Black<sup>2</sup> Dual  
Drive  
Western Digital My Book  
Live Duo

### Memory

Kingston HyperX  
KHX1600C9D3K4/16GX  
Kingston HyperX FURY  
HX318C10FWK2/8  
Kingston HyperX Predator  
HX430C15PBK4/16

## Benchmark Software

### Operating System

Windows 7 Ultimate  
(64-bit)

### Futuremark

PCMark 8  
3DMark

### Industry Standard Benchmark Tools

AIDA64  
SiSoftware SANDRA  
Specy  
Unigine Heaven

# TEST LAB





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## CHIP Awards



### CHIP Editors' Choice Award

Awarded to products that receive unanimous endorsement from all CHIP editors for its overall brilliance



### CHIP Outstanding Award

Reserved for products that combine astute technical performance with good quality and design



### CHIP Recommended Award

Given to products that possess singular quality worthy of a recommendation

## Ratings

Each product review is rated on a scale of 1 to 5 for different key parameters:



**PERFORMANCE** : Refers to the efficiency of execution

**FEATURES** : Rates the abilities and unique characteristics available

**DESIGN** : Varies according to product. Finished products - form factor and build quality. Hardware components - layout, size and cooling solution. Software - user interface

**VALUE** : Calculated from the performance and features of the product in relation to the price



## BOOM BOOM BOOM

If you ever thought your ZenPad needs a bit more oomph while you're watching videos or when you're having a small party, you can get yourself the ASUS Zenpad 7.0 Audio Cover. It comes with four satellite speakers, one centre-channel speaker, and one subwoofer which provides outstanding surround sound. It also boasts up to 6 hours of battery life so you will get a lot of usage out of it before it needs to be recharged, and let's not forget ASUS' Audio Wizard a smart software that complements the Audio Cover to optimise the surround sound effect by adjustable settings. The ZenPad 7.0 Audio Cover is compatible with the Z370C, Z370CG, and Z370KL.

### ASUS ZenPad 7.0 Audio Cover

**Contact:** Build Technology Supply Sdn Bhd., Servex (Malaysia) Sdn. Bhd

**Phone:** (03) 7955 3699, (03) 8024 6688

**Info:** [www.asus.com/](http://www.asus.com/)

## Power Pack In The Back

So maybe you left your laptop in the office or at home, but you need to get some urgent work done or maybe you're on a long boring international flight, but your ZenPad doesn't have enough juice. Well, have no fear, the ZenPad 7.0 Power Case is here! The Power Case extends the ZenPad's battery life to up to 14 hours so you will have a companion on those long lonely flights. What makes the Power Case even better is the beautiful design, with a metallic frame and an embossed leather patterning which are just to die for. Best thing about it is, it's light and slim and barely adds any bulk which makes it a perfect addition to your ZenPad. It is compatible with the Z370C, Z370CG, and Z370KL.

### ASUS ZenPad 7.0 Power Case

**Contact:** Build Technology Supply Sdn Bhd., Servex (Malaysia) Sdn. Bhd

**Phone:** (03) 7955 3699, (03) 8024 6688

**Info:** [www.asus.com](http://www.asus.com)



## DDR4 Is Here For The Little Ones

With Intel releasing their new Intel 6th generation Core processors codenamed Skylake, it only seems natural that DDR4 will start basking in the spotlight with brands quickly chugging out their own iterations. But Kingston takes it a step further with its HyperX Impact DDR4 SO-DIMMs for notebooks, small form-factor systems, mini-PCs, All-in-one PCs and Steam Machines targeting a niche market. With the PnP functionality providing automatic overclocking capabilities, for those who wish for a fuss-free performance upgrade. Available in frequencies from 2133MHz to 2666MHz; as 8GB and 16GB dual-channel kits of 2; and in 4GB and 8GB single modules.

### Kingston HyperX Impact DDR4 SO-DIMMs

**Contact:** Amble Action Sdn Bhd., Convergent Distribution(M) Sdn Bhd., Ingram

Micro Malaysia Sdn Bhd

**Phone:** (03) 7665 3939, (03) 2144 1881, (03) 7952 8188

**Info:** [www.hyperxgaming.com/](http://www.hyperxgaming.com/)

### Not Just Another Bluetooth Device

It's time to get rid of all that pesky wires that tangle regardless of how you roll it up and keep it. The Plantronics Explorer 500 is a mobile Bluetooth headset that features smartphone voice control, multi-lingual notifications, magnetic USB strap and is certified for HD voice clarity. Smartphone voice control allows you to use Siri or Cortana through the Explorer 500. It also provides a full GSMA-certified HD voice experience on wideband-enabled phones and networks, and let yourself be heard clearly with Plantronics' signature noise and wind cancelling technologies.

#### Plantronics Explorer 500

**Contact:** Ban Leong Technologies Sdn. Bhd

**Phone:** (03) 7956 6300

**Info:** [www.plantronics.com](http://www.plantronics.com)



### A Faithful Companion

The Logitech M337 Bluetooth Mouse lets you connect to virtually any device so you can create on a computer or tablet anytime, anywhere. With its compact and portable design which allows you to slip it into your bag or pocket, have the freedom to work anywhere. Meanwhile gain smarter control over your device with the navigation buttons and tilt wheel all in the palm of your hand, and with its curved shape and textured rubber grips, the Logitech M337 provides lasting comfort during extended use. Combined with a smooth and precise laser-grade optical sensor, it works on just about any surface.

#### Logitech M337 Bluetooth Mouse

**Contact:** Ingram Micro Sdn Bhd., MCL Sdn Bhd., M-Link Sdn Bhd., Kaiera Technologies Sdn Bhd

**Phone:** (03) 7955 8188, (03) 8023 3800, (03) 7728 9003, (03) 7955 3669

**Info:** [www.logitech.com/en-my](http://www.logitech.com/en-my)



### Wait Let Me Take A Selfie

The ALCATEL Onetouch Flash Plus is ALCATEL FLASH's latest smartphone targeted for selfie addicts. Sporting an 8MP wide angle camera which allows capturing pictures of a wider area, perfect for those groupie moments, especially with its intelligent voice recognition feature allowing you to take selfies/groupies simply by saying 'cheese'. It also comes with a 13MP rear camera that allows for photography in a variety of lighting conditions. Powered by a 64-bit octa-core 1.5GHz processor and Mali-T760 GPU together with 2GB RAM to provide smoother, richer and enjoyable experience. The ALCATEL Onetouch Flash Plus in Matt Slate is exclusively only available on Lazada due to a partnership between Lazada and ALCATEL FLASH.

#### ALCATEL Onetouch Flash Plus

**Contact:** Ten Ten Telecommunications Sdn. Bhd.

**Phone:** (03) 5569 1010

**Info:** [www.alcatelonetouch.com/ml/](http://www.alcatelonetouch.com/ml/)







## Small Yet Big

Featuring AMD's latest High-Bandwidth Memory (HBM) that delivers 60% more memory bandwidth than GDDR5, and a 4096 bit memory interface that promises incredible advances in power and efficiency. The MSI R9 Nano 4G together with HBM makes it a powerful graphics card, where no graphic card has ever packed so much performance into such a small card. While small form factor PC's are still quite a niche market, AMD and MSI are ready to cover even the most specialised of markets to show their dedication to gaming. The R9 Nano 4G is AMD Crossfire ready combining great performance all in a 6-inch small form factor graphics card.

### MSI R9 Nano 4G

**Contact:** JW Power Marketing Sdn. Bhd., Mediaforte (Malaysia) Sdn. Bhd., Advancenet Technology Sdn. Bhd.

**Phone:** 03-2148 1307, 03-7960 6868, 03-8070 3633

**Info:** my.msi.com

## Everything You Need At Home

The ASUS ET2030 is an all-in-one PC that's set to bring everything you need for a home PC in a neat package. Featuring an ultra slim 10-point 19.5-inch multi-touch display that allows easy and intuitive control. Powered by Intel's 4th-generation Intel Core i3-4160T the PC consumes less energy but still delivers outstanding performance. The ET-2030 will also feature a 1MP camera for video conversations and comes bundled with a mouse and keyboard so there isn't much else you need to buy. It also comes with a 1TB hard-drive and 4GB of DDR3 RAM together with a Super Multi-DVD RW drive for reading and burning DVD's.



### ASUS All-In-One ET2030

**Contact:** Build Technology Supply Sdn Bhd., Servex (Malaysia) Sdn. Bhd

**Phone:** (03) 7955 3699, (03) 8024 6688

**Info:** www.asus.com/my/



## Crack Of Thunder

The GIGABYTE Z170X-UDH TH is a motherboard that supports both 6th-generation Skylake Intel Core processors and Thunderbolt 3. Thunderbolt 3 will bring single-wire bandwidth speeds of up to 40 Gb/s, which is twice more than the previous generation of Thunderbolt. With the increase in bandwidth comes support for different protocols such as USB 3.1 which is backwards compatible with USB 3.0 and USB 2.0, and DisplayPort 1.2. DisplayPort 1.2 being a must have for any enthusiast, being able to support two displays at 4K resolution at 60FPS or one display at 5K resolution. And with features such as Power Delivery 2.0 allows daisy-chaining of up to 12 devices.

### GIGABYTE Z170X-UDH TH

**Contact:** Nation-Tech Sdn.Bhd., Ban Leong Technologies Sdn Bhd

**Phone:** 03-4280 6636, 03-79566300

**Info:** www.gigabyte.my

## The Majestic SEA HAWK

MSI and Corsair join forces to push the NVIDIA GTX980Ti to its limits with a closed loop liquid-cooling solution. Combining MSI's expertise in graphics card and Corsair's cooling solutions, the GeForce GTX 980Ti SEA HAWK was born. The SEA HAWK utilises Corsair's H55 closed loop liquid-cooling solution with its micro-fin copper base taking care of efficient heat transfer to the high-speed circulation pump. With an easy to install low-profile aluminium radiator equipped with a variable speed 120mm super-silent and a custom shroud design that has a ball-bearing radial fan, ensures the best cooling performance for all components.

### MSI GTX980Ti SEA HAWK

**Contact:** JW Power Marketing Sdn. Bhd., Mediaforte (Malaysia) Sdn. Bhd., Advancenet Technology Sdn. Bhd.

**Phone:** 03-2148 1307, 03-7960 6868, 03-8070 3633

**Info:** my.msi.com



## Compact and Classic

The Aztech DSL5028EN (2T2R) offers exceptional wireless coverage and performance all in a compact design. Look forward to impressive speeds, wireless coverage and superb user functionalities. It also features an easy to navigate web user interface that simplifies setup and installation of the modem router, it also has WPS capabilities for your WPS-supported devices. The DSL5028EN (2T2R) has integrated MIMO technology that provides better, faster and wider wireless coverage topped off with an even more reliable wireless performance, also now with TR-069 support, the Aztech DSL5028EN is capable of remote management and a zero touch set up.



### Aztech DSL5028EN (2T2R)

**Contact:** Az-Technology Sdn Bhd

**Phone:** (03) 7804 8450

**Info:** www.aztech.com.my

## Gear Up For Gaming

The ILLEGear Z5 is about to go through a refresh as ILLEGear starts to replace most of their laptops with the new sixth generation Skylake Intel Core Processors. The laptop will feature the brand new Intel HM170 Express Chipset and Intel Core i7-6700HQ processor combined with the NVIDIA GeForce GTX 960M/970M and 16GB DDR4 SDRAM 2133MHz making high-end mobile gaming not just a dream. For playing media the laptop has a 15.6-inch Full HD Anti-glare IPS/AHVA display together with two built-in speakers and one subwoofer for that satisfying audio visual experience.

### ILLEGear Z5

**Contact:** ILLEGear Sdn Bhd

**Phone:** 03-77329958

**Info:** www.illegalgear.com





### Inspired By Elegance

Philips is rolling in a new LCD monitor with a brilliant wide view, offering vivid colours and crisp details wrapped in an elegant design. The 237E7QDSB/SW is a Mercury Free eco-friendly 23-inch AH-IPS 16:9 Full HD display with low power consumption and features Flicker-Free technology to lessen eye fatigue. Not only that, the monitor also features SmartContrast for deeper levels of black and SmartImage Lite for easy optimised image settings. Sporting an edge-to-edge glass and narrow border for seamless appearance, it's elegant and slim design will complement your home or office décor easily.

**Philips 237E7QDSB/SW**

**Contact:** Ban Leong Technologies Sdn Bhd

**Phone:** 03-79566300

**Info:** [www.philips.com](http://www.philips.com)

### High-Res Audio On The Move

The Sony NW-ZX100 Walkman comes equipped with a new High-Resolution Audio compatible noise cancelling function. Aimed to reproduce music just as the artist intended beyond CD quality, and enhancing your compressed music files such as MP3 using DSEE HX technology, which complements the treble of compressed sound sources and bit rate beyond their original values up to a region that corresponds to near High-Resolution sound quality. It comes in a sleek rounded aluminium frame and bass plate for high rigidity along, with lead free solder developed by Sony for high-end audio products that allows the NW-ZX100 to produce a natural frequency balance.

**Sony NW-ZX100 Walkman**

**Contact:** Sony (Malaysia) Sdn Bhd

**Phone:** 1 300 88 1233

**Info:** [www.sony.com.my](http://www.sony.com.my)



### Best Of Both Worlds

Phablets have become much more popular in recent years, as consumers began asking for bigger screens. Lenovo gives them what they are asking for with the Lenovo PHAB Plus, a beautifully designed premium phablet, optimised for single-handed operation. The PHAB Plus comes stock with Android 5.0 providing enhanced performance for seamless networking. Powered by Qualcomm's Snapdragon 615 octa-core chip with 2GB memory for smooth functions and usability. When it comes to capturing videos and images the phablet sports a 13MP rear and 5MP front camera with dual-LED flash, moreover what better way to view videos and images taken with the PHAB Plus's 6.8-inch Full HD IPS 326ppi display?

**Lenovo PHAB Plus**

**Contact:** Lenovo Technologies Sdn.Bhd

**Phone:** 1 800 80 8575

**Info:** [www.lenovo.com/my/en](http://www.lenovo.com/my/en)



## Switch It Up A Little

The Acer Aspire Switch 11V a powerful 2-in-1 laptop for work and play, the successor to the Switch 10 now comes with the Acer Snap Hinge 2. The Acer Snap Hinge is a magnetic and latch less which comes with a guiding plane design that supports smoother transition between four modes: laptop, display, tablet and tent. It also comes with an 11.6-inch HD IPS screen which is protected by a Corning Gorilla Glass 3 and together with Zero Air Gap technology, delivers an expanded 178-degree viewing angle. Acer also takes your viewing experience to the next level by protecting your eyesight with their BlueLightShield feature reducing blue light emission from the screen.

### Acer Switch 11V

**Contact:** Acer Sales and Services Sdn Bhd

**Phone:** 1 800 88 1288

**Info:** [www.acer.com.my](http://www.acer.com.my)



## Extreme Portable Storage

Featuring transfer speeds nine times faster than a portable hard drive, the SanDisk Extreme 900 Portable SSD gives users significant advantage when working with 4K video or taking detailed high-res photos. Available in up to 1.92TB, the Extreme 900 is all about performance and capacity, and with its compact and durable aluminium casing professionals can bring it just about anywhere, carrying with them a massive portfolio they can access or share in just seconds. Both USB Type-A and Type-C cables are supported by the new drives to provide the ultimate flexibility when working between systems.

### SanDisk Extreme 900

**Contact:** Ingram Micro Sdn Bhd, Vector Digital Sdn Bhd

**Phone:** (03) 7940 8888, (03) 2143 2822

**Info:** [www.sandisk.com](http://www.sandisk.com)



## Eat My Dust

Using V-NAND technology, the Samsung 950 PRO is the first consumer ready SSD that uses this technology as a M.2 PCIe device. Geared for professionals using high-end PCs and workstations, the SSD supports PCIe Express 3 x4 lanes, providing higher bandwidth and lower latency to process massive amounts of data. Able to deliver speeds of 2.5GB/s sequential read and 1.5GB/s sequential write makes it faster than SATA SSDs by over 4.5 times. Not only that, even with such amazing performance the 950 PRO only consumes 5.7W at peak workloads and only 2.0 milliwatts of power, less than half the power consumption of a SATA in Device Sleep Mode.

### Samsung 950 PRO SSD

**Contact:** Samsung Malaysia Electronics Sdn Bhd

**Phone:** 1800 88 9999

**Info:** [www.samsung.com.my](http://www.samsung.com.my)



# ASUS RT-AC55UHP

**Price:** RM519

**Contact:** Advancenet Technology Sdn Bhd, SDS Distribution Sdn Bhd

**Phone:** (03 8070 3633, (03) 7782 4700

**Info:** www.asus.com.my

**Ports:** 1x RJ45 for 10/100/1000/Gigabits BaseT for WAN, 4x RJ45 for 10/100/1000/Gigabits BaseT for LAN, 1x USB 2.0, 1x USB 3.0

**MIMO:** Yes

**Connectivity:**

**Network Standard:** IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.11ac, IPv4, IPv6

**Encryption:** 64-bit WEP, 128-bit WEP, WPA2-PSK, WPA-PSK, WPA-Enterprise, WPA2-Enterprise, WPS support

**Dimensions:** 207 x 148.8 x 35.5mm **Weight:** 539g

**Performance:**

**Features:**

**Design:**

**Value:**



## High Powered And Fast Networking

By Nixon Ng

Connecting everyone in the office/home has never been easier

Don't you just hate it when your WiFi signal just doesn't reach out to the ends of your home? Maybe you live in a one floor apartment yet the signal just doesn't reach your living room or the kitchen. Internet Service Providers (ISPs) will usually provide customers with decent modems and routers but sometimes it just isn't enough.

The ASUS RT-AC55UHP is actually a variant of the RT-AC55U, having an enhanced power amplifier and detachable high-gain antennas. Not only that, the RT-AC55UHP supports 802.11a/b/g/n/ac while its predecessor only supports 802.11n/ac. Other than that they are pretty much the same piece of hardware. The router is UniFi ready and just requires you have your UniFi username and password ready during setup. It also features dual-band connectivity delivering 2.4GHz and 5GHz concurrently at up to 300Mbps and 867Mbps and maintains complete stability.

Setup was reasonably quick and simple, we just plugged in our LAN cables into the router then entered the default gateway into the web browser, and the RT-AC55UHP uses a web-based user interface in which we were welcomed by a quick setup page. The quick setup gave us an

option to pick UniFi as an ISP, so any special settings required for UniFi accounts have already been inputted into the router, which made things easy.

After setup was done we tested the coverage that the RT-AC55UHP could achieve, and we were satisfied with the results. The WiFi signal is able to reach rooms and places it couldn't before, so when it comes to coverage the RT-AC55UHP achieved our expectations. But we won't stop there, we decided to give the USB 3.0 and USB 2.0 ports a try and placed a movie inside a USB 3.0 ready flashdrive to distribute throughout the test lab. The movie was copied from the router through the network and the results were great, transfer speeds were satisfying.

We found the AiCloud feature pretty useful as we tend to share documents and pictures a lot here in CHIP, so the feature was used quite prominently while we were testing the router. The RT-AC55UHP also features an EZ-Switch that allows it to switch between router, media bridge and access point modes. This can be done through the web interface and is quick and easy with no delays or hassles. 🇲🇾



RT-AC55UHP has color coded ports to ease the minds of first-timers, who have never switched their router before



Let's not get too handy. The router looks amazing but it's hard to keep smudge-free



Wide coverage  
Easy setup



None

### CHIP CONCLUDES

ASUS has done well in developing the RT-AC55UHP, a simple yet powerful router for those who ask for more and can afford to throw in a little bit extra cash into getting a quality piece of networking hardware.

# GIGABYTE GA-Z170X- Gaming G7

**Price:** RM1,039

**Contact:** Nation-Tech Sdn.Bhd.,  
Ban Leong Technologies Sdn Bhd

**Phone:** 03-4280 6636, 03-79566300

**Info:** www.gigabyte.my

**Slots:** LGA1151 CPU: Intel Z170

**RAM Slots:** 4 RAM **Type:** DDR4

**Ports:** 1x HDMI 2.0, 1x DisplayPort 1.2, 1x PS/2 keyboard/mouse,  
1x USB Type-C, 1x USB 3.1 Type-A (red port), 5x USB 3.0/2.0, 2x  
RJ-45, 1x S/PDIF Out, 5x audio jack (Center/Subwoofer Speaker  
Out, Rear Speaker Out, Line In/Mic In, Line Out, Headphone)

**PCMark 8 (Home):** 4,169 points

**PCMark 8 (Creative):** 4,511 points

**PCMark 8 (Work):** 3,585 points

**Performance:**

**Features:**

**Design:**

**Value:**



## Game On With GIGABYTE

Get into the spirit of gaming with GIGABYTE's latest motherboard

By Nixon Ng

The world of gaming has grown to something that no one would ever have expected. Gaming is no longer just a hobby, to many it's a way of life. The GIGABYTE Z170X-Gaming G7 is one of the many gifts they wish to bestow upon gamers. Built and designed with the gamer in mind, all of their vision and drive packed into a motherboard to usher in a new generation (6th-generation Skylake Intel Core Processors).

The Z170X-Gaming G7 will support the latest 6th-generation Intel Core Processors and DDR4 RAMs. Sporting 4x DDR4 Dual-channel DIMM sockets the motherboard will support up to 64GB of RAM with speeds ranging from 2133MHz to 3866MHz (overclocked).

Storage wise the G7 features 8x SATA3 6Gb/s (2x AHCI mode only), 3x SATA Express, 2x M.2 Socket 3 connectors and supports RAID 0, 1, 5, 10. The M.2 Socket 3 are PCIe Gen3 x4 M.2, delivering up to 32Gb/s data transfer speed per connector that's perfect for your SSD's, and even supports RAID modes. Meanwhile the board also supports full-length graphic cards and up to 2-way NVIDIA SLI and 3-way AMD CrossfireX. Each PCIe x16 slot is reinforced with an innovative one piece stainless steel shielding to provide extra strength to support heavy

graphics cards.

USB ports are aplenty and should have many still open even after connecting all your accessories, and really impressed us with the USB DAC-UP feature that promises clean and noise-free power delivery to Digital to Analog Converter (DAC). It does this by using an isolated power source that minimizes potential fluctuations as DACs are sensitive to fluctuations in power from other USB ports. This really shows us how much GIGABYTE appreciates audio, which makes us very excited when they take it a step further.

The Z170X Gaming 7 is one of GIGABYTE's top of the line products both in terms of features and performance, and it shows during our tests. The Turbo B-Clock feature in particular allowed us to overclock to a value of our choosing, allowing us to maximise the clockspeed of the CPU without having to worry about going overboard and crashing.

The LED Trace Path feature also lets users choose between seven different colours, if PC modding is more of your thing. It also comes with a variety of lighting modes, which can accentuate your custom PC's looks even further, making it the envy of many. 📺



The Gaming G7 has all the ports you'll ever need, ranging from USB 3.0 ports to gold plated audio jacks.



The PCIe slots feature a metal plating that keeps heavy graphics card from bending and potentially damaging the board

+	ON switch + LED	
	Debugger	
	Upgradable OP-AMP	
	PCIe Shielding	
		- None

### CHIP CONCLUDES

The Z170X Gaming G7 is a great motherboard that features a number of excellent features, and has good performance to boot.



# Intel Core i7-6770K

Price: USD\$ 393.53 (RM1,739)

Contact: Intel Malaysia

Phone: (03) 2146 6400

Info: [www.intel.my](http://www.intel.my)

CPU Type: Intel CPU

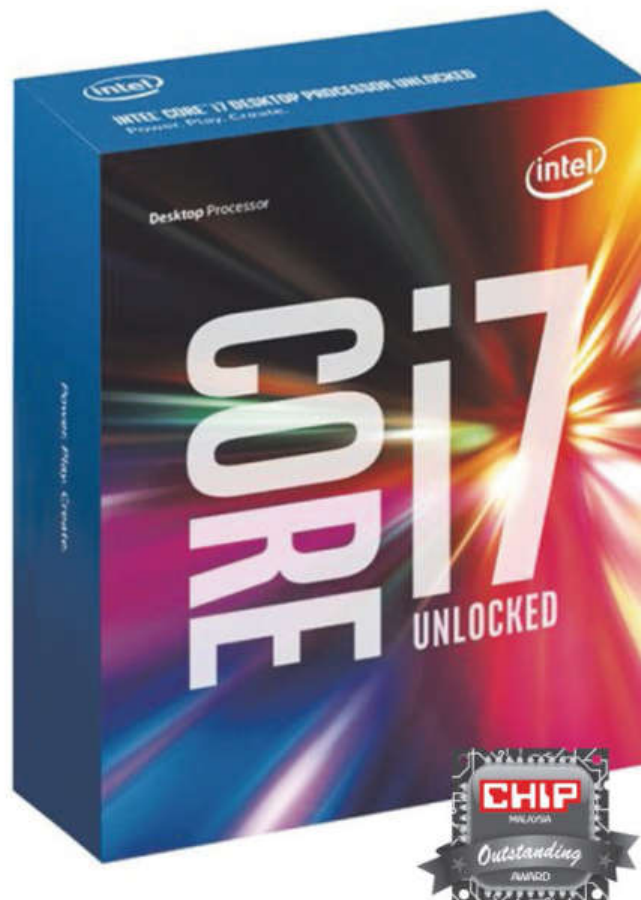
CPU Socket: LGA 1151

Chipset: AMD Skylake

Performance:

Features:

Value:



## Welcome To Skylake

Intel's new desktop processor is packed with new bells and whistles

Intel's processor release dates have been pretty haywire over the past couple of years, no thanks to delays in fabrication, the most obvious being Broadwell, which has had the misfortune of launching just months before Skylake was due to be out in our market. Intel has been kind enough to send us its latest Intel i7-6700K processor for us to take a look at its latest high-end desktop CPU to see what's new.


A bit of a backstory about Intel's Skylake processor. It was first announced at IDF 2014, amidst a time when Broadwell was still in release limbo. The 'tock' to Broadwell's 'tick', the Skylake processor is the second CPU to utilise Intel's 14nm process node, providing it with more space to include even more features rather than just your typical speed boost.

Speaking of speed boosts, the i7-6700K processor comes with a base clock of 4.0GHz, with a Turbo frequency of 4.2GHz, with the former featuring a base 500MHz speed bump over Haswell's 3.5GHz. An interesting thing to note while Skylake natively supports DDR4 memory, it also works with DDR3 RAM sticks, although this is highly dependant on the

motherboard manufacturers on whether or not they want to use DDR4 or DDR3 memory on their motherboards.

As far as processor features go, the i7-6700K processor is stacked with Intel's new HD Graphics 530, which shows some promising gaming quality at 720p resolution, even with most of the graphics options turned down to low.

Overclocking is yet another important feature here, as the i7-6700K provides some pretty interesting numbers. On air, we managed to stably overclock the processor to roughly around the 4.5GHz mark without disturbing the voltage numbers all that much. Based on some research, we also saw that with liquid cooling, that number can go up to 4.9GHz, so imagine the numbers if extreme overclockers managed to unlock the processor's true potential.

That being said, what really wow'd us over is the fact that the Skylake processors come with native support for a number of other important features as well, such as NVMe, USB 3.1, additional PCI Express 3.0 lanes and DirectX 12. 



The new Intel processor comes equipped with a lot of new features, including native support for more PCIe lanes, USB 3.1 and NVMe storage support, as well as lower voltage numbers

+ Good for  
overclocking  
New features

— None

### CHIP CONCLUDES

Performance-wise, the benchmark numbers are just slightly above that of the likes of Haswell and Devil's Canyon, but as it does come with a number of bells and whistles that we mentioned above, the processor is certainly one to consider if you're building a PC that is both powerful and future-proof.

# Samsung Galaxy Tab S2 9.7"

**Price:** RM1,999

**Contact:** Samsung Malaysia Electronics Sdn Bhd

**Phone:** 1-800-88-9999

**Info:** www.samsung.com.my

**Display:** 9.7-inch QXGA Super AMOLED

**Processor:** Samsung Exynos Octa 5433 (4x 1.9GHz + 4x 1.3GHz)

**Connectivity:**

**Memory:** 3GB

**Storage:** 32/64GB expandable up to 128GB with MicroSD

**Operating System:** Android 5.0.2 Lollipop

**Camera:** 8-megapixel rear camera, 2.1-megapixel front-facing camera

**Dimensions:** 169x237x5.6mm **Weight:** 392g

**3DMark:**

**Ice Storm Extreme:** Maxed Out **Ice Storm Unlimited:** 19,371 points

**PC Mark Work:** 5,492 points **Antutu:** 53,443 points

**Performance:**

**Features:**

**Design:**

**Value:**



The Tab S2 features an 8MP camera that takes decent videos and photos.



Almost everything is found at the bottom of the tablet, from charging ports to the earphone jack and speakers.

## A Tab From The Stars

By Nixon Ng

Samsung has done us proud, bringing us yet another tablet worthy of a place in the stars

Samsung is back again to show us what they're made of, rocking the tablet market with their Galaxy Tab S2. Coming in both 9.7-inches and 8.7-inches variations, we had the opportunity to take the 9.7-inch variant out for a spin.

First impressions are important, it's what decides your expectations and how you're going to perceive the product when you're using it. Our first impressions? To be honest, we thought it looked pretty simple. The front looked alright, but the back cover didn't leave a lot to be desired. All in all the Galaxy Tab S2 could have done better overall for its looks.

But let's dig deeper shall we? The Galaxy Tab S2 comes with a 9.7-inch QXGA Super AMOLED display. The screen is bright and the colours come out well, while text is crisp and easily read. The 9.7-inch display is large and despite that, Samsung manages to produce a clear and enjoyable visual experience. Good job on Samsung's part, as the larger screen would encourage us to work more often on the Galaxy Tab S2.

Speaking a tad more on the design and layout of the Tab S2, the right side houses

the power button and the volume up & down buttons, also on the right would be the dual SIM slots. On the bottom you will find the earphone jack, MicroUSB data/charging port, and 2 speakers on each side.

The Galaxy Tab S2 runs on Android 5.0.2 Lollipop out of the box and is powered by the Samsung Exynos 5433. It also runs off 3GB of RAM together with 32/64GB of internal storage, which is expandable up to 128GB by MicroSD. Keeping the Galaxy Tab S2 up and running is a 5870mAh battery. On idle, the tablet is able to last for days easily with WiFi on, and even on heavy load the tablet should easily stay up and running throughout the day.

Playing around with the Galaxy Tab S2, we found the interface to be smooth, scrolling through apps and menus. It plays even the most graphically demanding mobile games without breaking much of a sweat. Music plays great on the Galaxy Tab S2 with the soundtracks we used for testing. But let's not forget about the 8-megapixel camera which boasts a large aperture for low light photography. The rear camera takes great pictures in low light especially in its HDR mode. 📷

➕ Powerful  
Large screen  
Battery life

➖ Slightly boring  
design  
Price

### CHIP CONCLUDES

The Galaxy Tab S2 performs like a dream, with everything running smooth as silk. Though having a better camera would have been really great to make the experience we had more satisfying.

# Sony Xperia M4 Aqua Dual

Price: RM696

Contact: Sony (Malaysia) Sdn Bhd

Phone: 1-300-88-1233

Info: [www.sony.com.my](http://www.sony.com.my)

**Display:** 5-inch HD IPS Display

**Processor:** Qualcomm Snapdragon 615 dual quad-core 64-bit processor (4x 1.7GHz + 4x 1.0 GHz)

**Connectivity:** USB 2.0, Bluetooth 4.0, Wi-Fi 802.11 a/b/g/n

**Memory:** 2GB

**Storage:** 8Gb internal storage expandable with microSD

**Operating System:** Android 5.0 Lollipop

**Camera:** 13-megapixel rear camera, 5-megapixel front camera

**Dimensions:** 145.5 x 72.59 x 7.3mm **Weight:** 135g

**3DMark**

**Ice Storm:** 7,826 points **Ice Storm Extreme:** 4,402 points

**Ice Storm Unlimited:** 6,854 points

**PC Mark Work:** 3,670 points

**Antutu:** 30,551 points

**Performance:**

**Features:**

**Design:**

**Value:**



## Xperience The Xperia

By Nixon Ng

Sony's gift to the modern day geeks

In the current age and day we spend a lot of our time on our phones, our lives revolves around this little device we call a phone. Smartphones are now a convenience that many can't live without these days. Phones have evolved from just calls and texting to what it is now today, a tool for sharing your life with friends and family, a trend-setting fashion statement, a portal to the world wide web, and a part of you.

The Sony Xperia M4 Aqua Dual seems to hit all the right spots. Being at only 135g, we found the Xperia M4 Aqua to be satisfyingly light. The design is refreshing and simple but with a hint of class. The buttons are laid out perfectly, with each button being easily reached even with single handed use. Though we found the microUSB charging port to be awkwardly placed and thought it would have been better to put it at the bottom. The curved sides makes the phone easy and comfortable to hold.

Powering the phone is Qualcomm Snapdragon 615, a dual quad-core 64-bit capable processor with 4 cores at 1.5GHz and another 4 at 1.0 GHz, together with 2GB

of RAM. Navigation through menus and applications are smooth and are without lag, with the 5-inch HD IPS screen doing a fine job displaying crisp and clear text and deep vibrant colours. But with only a 2400mAh battery, heavy usage still drains the battery quite a bit. Playing games for a long period of time eats up quite a bit of battery, and the phone can get pretty warm so not the best choice if you like to game on your mobile.

Some things we didn't like about the phone is probably how the buttons feel, small issue but an issue we did find worth mentioning. The buttons are well placed about the phone but the issue comes from their feel. The buttons feel flimsy, plastic and are pretty hard to push down (some may find this a plus).

But what really takes the bag, is the camera on the Xperia M4 Aqua. With the Exmor RS sensor, the phone takes astonishingly great pictures in low-light. Sony did a really good job with both the front and rear cameras, both capable of taking great quality pictures. Selfies, Wefies, Groufies, just name it and the phone delivers. 📷



Thanks to the M4 Aqua's build design, the phone is quite light and easy to hold



The Aqua M4 features a 13MP camera, and the LED flash lights up the frame of the phone, providing a more natural lighting even under low-light conditions

Smooth experience  
Low-light photography  
Light

— Feel of buttons

### CHIP CONCLUDES

Sony has done a great job with this phone, though with some shortcomings the phone performs great. It's light, snazzy and takes great pictures in almost any condition, which makes it a great choice for those who love snapping pics here and there.



# Das Keyboard Model S Professional

Price: RM613.50

Contact: Tech-a-Porter

Phone: 019-569-2664

Info: <http://www.tech-a-porter.com/das-keyboard>

Keyboard Switches: Blue Cherry MX

NKRO: PS/2

Interface: USB 2.0 & PS/2 adapter

Weight: 1.36kg

Performance:

Features:

Design:

Value:



# Das Keyboard Model S Professional

Putting the Professional in Model S "Professional", Das Keyboard brings to the plate a simple and elegant mechanical keyboard that makes you feel like a professional

By Nixon Ng

When your old keyboard has its keys falling off, or if you are planning to step up your typing and gaming technique. Well it's time for you to get a mechanical keyboard! There is a saying among mechanical keyboard owners, and that is 'Once you go Mech, you can't ever go back.'

Sent to us was the Das Keyboard Model S Professional with Blue Cherry MX Switches. Blue switches are tactile switches where when typing, you will be able to feel and hear each keystroke. Right out of the box we could feel the weight of the Model S, giving us a good idea how well built it is. The Model S comes with a nice thick USB cable which we love, because we won't have to worry about the cable snapping on us. It also comes with a PS/2 adapter which will enable the Model S to have NKRO(no-key-roll-over) as USB only allows up to 6KRO(6-key-roll-over).

The keyboard is well built, it looks and feels like a premium product. The keycaps are laser-etched to prevent fading of the letters. It also comes with two USB 2.0 ports which are USB 1.1 compatible on the right side of

the keyboard. Getting more into the features of the Model S, it has media keys laid out on the F1 to F12 keys. With the function key, you can control your computer's volume and media player. There is also a sleep button to quickly put your computer to sleep when you need to take a break.

The Model S exudes confidence with its glossy black cover, and well-built body. Though keeping the board smudge and fingerprint free is tough. Typing on the board is an experience on its own, with each keystroke producing a satisfying click and tactile feedback, makes typing that much more enjoyable. One thing to note is that the keyboard requires both USB heads to be plugged in to ensure full functionality of the keyboard. And another thing we didn't really like were the retractable feet which were a tad on the flimsy side and slippery.

Available in both Red and Brown MX Cherry switches you'll be able to enjoy the Das Keyboard Model S Professional in a manner of your liking. 🇲🇾



Media buttons for when you're too lazy to click



2x USB 2.0 ports compatible with USB 1.1

+ Solid build  
Thick cable  
USB ports

- Extendable feet  
could be better  
No backlight

## CHIP CONCLUDES

The Model S Professional is easily one of the best in its price range, but with so many competitors out there with better features, it's hard to pull the trigger indefinitely. But nonetheless the Model S is a solid and well performing keyboard.

# ASUS Zenpad 7.0

**Price:** RM 749

**Contact:** Dynamics Distribution Sdn Bhd,  
ECS Astar Sdn Bhd

**Phone:** (03) 8024 2100, (03) 6286 8222

**Info:** www.asus.com/my

**Display:** 7" IPS display @ 800 x 1280 pixels

**Processor:** Intel Atom X3-C3230

**Connectivity:** 2G/3G/Wifi/Bluetooth

**Memory:** 2GB **Storage:** 16GB

**Operating System:** Android 5.0

**Camera:** 8 megapixels

**Dimensions:** 189 x 110.9 x 8.7 mm **Weight:** 272 grams

**3DMark**

**Ice Storm Extreme:** 3,499 points

**PCMark for Android:** 2,410 points **Antutu:** 20,745 points

**Performance:**

**Features:**

**Design:**

**Value:**



## A Compact Tablet That Makes Calls

By Nazrin Zain

While some may scoff at the need of a tablet that can make calls, some see it as a gateway to the digital age

Tablets are now part and parcel of our daily digital lives. So are tablets. While the latter is not gaining the number of following as it used to - the allure of owning a tablet is still there. The biggest market for tablets are surprisingly first time smart phone users - transitioning from a feature phone to a full fledged smartphone. ASUS is one of the bigger companies pushing their tablets to the market, and their ZenPad.7.0 is what users want in a tablet - and perhaps a bit more.

From the outset the tablet is quite compact. While many 7 inch tablets feature ungainly bezels at its price point - the Zenpad 7.0 features a surprisingly slim bezel - which in turn makes it compact to hold in one's hands. While you will not do any one-hand typing with it, it is still slim and compact enough to be held in either hand.

The Intel Atom X processor means what while it is no performance speedster - it can do whatever you can throw at it sufficiently. All this while accepting calls. Yes, the Zenpad 7.0 is also a 3G phone. You can make calls with it - and it doesn't look too silly putting this tablet up to your ear.

Paired with the X3 processor are 2GBs of RAM, 16GB of internal storage, the aforementioned 7 inch display which features a 800 x 1280 pixel panel, an 8 megapixel rear camera and 2 megapixel camera on the front, and a snazzy design that features interchangeable panels.

Yes, the tablet comes with an interchangeable back panel - which can be changed with a different coloured panel, or one of the several optional add on extras that ASUS has designed for the Zenpad 7.0. One of which is a 5.1 channel Audio Cover, which adds, well, 5.1 speakers to your tablet. The other optional cover available for the tablet is a power cover, which adds an extra battery onto the tablet.

Using the tablet is pretty nice, as the ergonomics of the design means that you will not suffer cramped hands if you hold it too long in your hands. However the tablet will suffer some jerkiness while using it - as the X3 is not the powerhouse like the other Atom processors. Still, it does its job at the end of the day and hey, for the price point - it is a great multi-tool smart device for anyone. 📺



The camera's 8MP camera takes decent candid shots



The tablet comes with a SIM card slot and expandable memory options, which is something of a rarity these days



Compact size  
IPS Screen  
Affordable



Laggy processor

### CHIP CONCLUDES

A great starting smart device or a media consumption secondary device. Don't expect Speedy Gonzales performance however.

# LG Music Flow H Audio Bars

**Price:** RM 799 (H3), RM 999 (H5), RM 1,299 (H7)

**Contact:** LG One

**Phone:** 1800-822-822

**Info:** [www.lg.com/my](http://www.lg.com/my)

**Amplifier:** H3 (1.0CH, 30W), H5 (2.0CH, 40W), H7 (2.0CH, 70W)

**Connectivity:** Ethernet, WiFi, Bluetooth, NFC, DLNA

**Input/Output:** Portable-in

**Sound mode:** Multi-room mode, stereo mode, Home Cinema mode

**Performance:**

**Features:**

**Design:**

**Value:**



## All For One, One For All

By Nazrin Zain

LG's H audio bars allow you to play your music where you want it, when you want it


Besides its smartphones, LG is also widely known for their home entertainment systems, and earlier this year, the company launched its latest in home audio systems, the LG Music Flow H series audio bars. Available in three different sizes, the H3, H5 and H7 all come with their own special features, but ultimately work in tandem to provide your house with the best audio entertainment system.

At the moment, the Music Flow series of audio bars come in three different variations. The H3 is the most compact of the lot, offers you with a diverse range of setup options, giving you the freedom of choice on where to place it. The H5 is the medium-sized product, providing users with exceptional stereo sound quality, while the H7 is the biggest of the lot, which is meant to be used as a hi-fi system, perfect for home cinemas.

Regardless of which of the Music Flow audio bars you purchased, they all share several common features, chief of which is the Auto Music Play function, which uses NFC technology to sync your phone to the speakers once, after which it will automatically detect the phone,

allowing you to straight away play your music on the speakers.

The true beauty with the Music Flow audio bars is its expandability options. You have the option to start with the H3, and then add a H5 to your collection. From there, you can use both these speakers as either standalone speakers, or even use them together to create an amazing audio experience. Same goes with the H7 as well, as you have the option to use all of it together, and even couple it with LG's wireless audio bars for a truly incredible cinema-like experience.

As far as sound quality goes, the Music Flow audio bars do not disappoint. The H3 may only be a 1.0 channel sound system, but it has enough depth in treble and bass that it is an amazing portable speaker in its own right. The H5 speakers are impressive as well, making full use of the 2.0 channel sound system to push out some amazing-sounding music. Do you enjoy streaming music from services such as Spotify or Deezer? The Music Flow speakers support streaming from them as well, expanding your choice of living room music options by that much. 



The LG MusicFlow H3 is the smallest of the lot, but pumps out some amazing audio in its own right



The LG MusicFlow H7 meanwhile functions well as a home cinema audio system, and is able to hook up to other wireless soundbars as well

+ Sound quality  
Modularity      - Price

### CHIP CONCLUDES

The LG Music Flow speakers are some of the most feature-packed wireless speakers we've seen so far. The fact that you have expandability options also make this a great set to consider for long term audio options.



# NVIDIA GTX 950

Price: USD\$139 (RM605)

Contact: NVIDIA Corporation

Info: [www.nvidia.com](http://www.nvidia.com)

GPU: GTX 950 GAMING 2G

Memory: 2GB GDDR5/128-bit

Ports: Dual Link DVI-I, HDMI 2.0, 3x DisplayPort

Slot Size: Dual-slot

3D Mark

Fire Strike: 5,626 points

Fire Strike Extreme: 2,903 points

Performance:

Features:

Design:

Value:



## Budget Gaming For MOBA Players

By Nixon Ng

Finally some love for LoL, DoTA, HoN and every other MOBAs out there

Not every gamer requires a high-end graphics card, some just prefer to play games that aren't so graphically intensive, and with the exponential rise in popularity of Multiplayer Online Battle Arena (MOBA) games these days it's not surprising that gamers nowadays don't require the top of the line flagship GPUs. So what does NVIDIA have to offer for this new generation of gamers?

NVIDIA sent in the MSI GTX 950 GAMING 2G for us to review their GTX 950 card. To start off, the GTX 950 is built on the Maxwell GPU microarchitecture which was developed as the successor of the Kepler, but on the GTX 950 a second-generation of Maxwell was introduced together with a slew of new technologies such as Dynamic Super Resolution, NVIDIA VXGI (Real-Time-Voxel-Global Illumination), HDMI 2.0 support, and many more.

Getting into the dirty details, the GTX 950 has a Core clock of 1024MHz and Boost clock of 1188MHz together with 2GB of GDDR5 memory and a 128-bit bus memory width. The card only requires a single 6-pin connector to fully power it, and has a TDP of 90W which is quite power

efficient. It will also support DirectX 12 and will feature G-Sync.

To really test what this card was built for we decided to pick up League of Legends to see how it does. The card performs exceptionally well in League of Legends, it plays smoothly in the highest settings at 1080p. But NVIDIA believes that just having smooth gameplay isn't enough when it comes to MOBAs, and takes it a step further. Using GeForce Experience's one-click Optimal Playable Settings delays are reduced and responsiveness increased through a combination of improved performance and latency optimisation.

So does it really work? One of our more 'experienced' MOBA players came to the conclusion that he could feel that actions were much more responsive. The delay between the click and when the action is performed is reduced as advertised and improves fluidness during gameplay. But of course playing just a single game isn't going to fully gauge the card, so we tested it with a few other games. The card smoothly plays most of the latest games at 1080p but between Med-High settings.



Only a 6-pin PCIe power plug is required to power the NVIDIA GTX 950



The GTX 950 has a pretty slim profile, able to fit in most small and medium-sized systems



Budget friendly  
Low power usage  
MOBA optimised

Memory only 2GB

### CHIP CONCLUDES

If you are just a casual gamer that dabbles in a bit of high-end games or you might be a MOBA player tearing up DoTA and LoL, this graphic card will be perfect for you.

# D-Link DIR-890L AC3200

**Price:** RM1,099

**Contact:** Advancenet Technology Sdn. Bhd.,  
Ingram Micro Sdn. Bhd., Lab Seven (M) Sdn Bhd  
**Phone:** (03) 8070 3633, (03) 7952 8188, (03) 80758811  
**Info:** [www.dlink.com.my](http://www.dlink.com.my)

**Ports:** 4x Gigabit Ethernet, 1x USB 2.0, 1x USB 3.0

**MIMO:** Yes

**Network Standard:** 802.11a/g/n/ac, 802.3/u

**Encryption:** WPS, WPA, WPA2

**Performance:**

**Features:**

**Design:**

**Value:**



By Nazrin Zain

## Not A Pyramid Scheme

D-Link goes all out with the DIR-890L AC3200 WiFi router

Network device manufacturers D-Link looks set to go all out in terms of both design and performance with its latest wireless router, the D-Link DIR-890L AC3200. Featuring cutting edge looks and components, the company is banking on this router to bring users the fastest network speeds money can buy.

The DIR-890L is unlike any other routers we've seen before, design-wise. The device itself is shaped like a pyramid of some sort, with a metallic red chassis enhancing its menacing looks. Placed around the router are six antennas which provides users with really strong coverage.

Powered by a 1GHz dual-core processor, the DIR-890L router is a tri-band router, with frequencies of 2.4GHz and two 5.0GHz bands which can be used for either fast internet speeds, or faster network file transfer speeds, whichever you need more.

At the back are four Gigabit Ethernet ports, which ensures that you get the fastest speeds out of your cable connection, if you should choose that route. Two USB ports make up the rest of the connectivity options at the back of the router, with one USB 2.0 port for printers,

and one USB 3.0 port for other media devices that require a faster data transfer rate.

Packed with features, the DIR-890L has support for a variety of connection types, including DHCP, Static, PPPoE, PPTP, L2TP, DS-Lite and even IPv6, if your ISP ever decides to move in that direction. From the settings page, you can also do things like set Quality of Service options, choose which 802.11 connection to use (supports all the way up to ac) and even set up services such as DLNA media servers, Windows File Sharing and Web File Access.

The graphical user interface for the router is also very user friendly, with some options such as the QoS even allowing its users to drag and drop to set network priority levels. Thanks to the UI, setting up your internet connection for use with UniFi is also a painless task.

Performance-wise, the DIR-890L router does a pretty good job at both transmitting the advertised internet speeds as well as local network transfer speeds. We managed to get a consistent 10Mbps on our UniFi connection, while local transfer speeds are fast enough to stream Full HD movies from a file server without lag.



The DIR-890L features four Gigabit LAN ports for maximum wired network performance



It also features one USB 2.0 and 3.0 port for printers and media devices

Beautiful design  
Great performance  
Packed with features  
+ Price

### CHIP CONCLUDES

The D-Link DIR-890L router is one of the most impressively-designed routers we've seen, both in terms of looks and performance. It is admittedly on the expensive side, but if you're looking for a router with many bells and whistles included, this is one for you to consider.

# Casio XJ-UT310WN

Price: RM9,699

Contact: Casio Malaysia Sdn Bhd

Phone: (03) 27241253

Info: [www.casio-intl.com/my/en](http://www.casio-intl.com/my/en)

Light Source: Casio Laser & LED Hybrid

Native Resolution: 1280x800

Contrast ratio: 1,800:1

Light source lifetime: 20,000 Hours

Ports: VGA, HDMI, RCA, S-Video, Audio-in, Mic-in

Dimensions: 338x333x153mm

Performance:

Features:

Design:

Value:



## Projecting Up Close And Personal

By Nixon Ng

Casio's amazing Ultra Short-throw projector XJ-UT310WN, brings the biggest screens into the smallest rooms


Though many, it's not often that we receive projectors to review here at CHIP. But what makes it different this time is that we were sent an Ultra Short-throw model from Casio. Integrating all of Casio's innovative technology such as being Lamp-free which uses a hybrid of Casio's laser and LEDs, the XJ-UT310WN allows you to use projectors even in a room with the most challenging of size constraints.

The XJ-UT310WN is quite a big piece of hardware, it weighs in at 5.5kg which is actually quite heavy. But with its weight comes a projector jam packed full of features and more connectivity than you can ask for. Able to project at a resolution of 1280x800, it can go up to a maximum of 1600x1200, albeit scaled down. Also being an ultra short-throw projector, it comes with a fixed focus lens so you will have to position it just right to get an optimal display.

As mentioned earlier, the XJ-UT310WN uses Casio's Lamp-free technology using lasers and LEDs to create a source of light instead of how traditional projectors use traditional lamps that rely on gases, which

in turn saves cost on power and has a quicker start up time. From switching on to displaying the chosen media only took up to 5 seconds which is considerably fast by today's standards.

The XJ-UT310WN is capable of projecting with a brightness up to 3,100 lumens, perfect for those morning and afternoon classes or meetings when your classroom or meeting room doesn't have proper protection from sunlight. When tested, the projector is able to display media with great clarity and detail. We also found the 2GB internal memory to be useful as we don't need to bring a laptop around to use the projector, and another interesting function is the ability to control the projector with a smartphone along with the remote controller with Casio's C-Assist.

It can be easily controlled through the buttons located on top of the XJ-UT310WN. Woops, almost forgot to mention that the projector has built-in speakers which you can use together with your presentation. Not the best sound quality but with everything packed inside the projector we can hardly complain as its good enough for regular usage. 



Casio's Lamp-free projection system makes an appearance here as well, saving energy and providing faster startup times



The Casio projector comes equipped with a variety of input and output options



Easy to use  
Quick warm-up  
Variety of inputs



None

### CHIP CONCLUDES

Casio XJ-UT310WN, a magnificent projector though heavy would make an incredible addition to any classroom, meeting room or even a mini-theatre for your small bedroom.



# ASUS Z170 Pro Gaming

**Price:** RM 859

**Contact:** Build Technology Supply Sdn Bhd.,  
Servex (Malaysia) Sdn. Bhd

**Phone:** (03) 7955 3699, (03) 8024 6688

**Info:** [www.asus.com/my/](http://www.asus.com/my/)

**Slot:** LGA 1151 **CPU:** Intel Z170

**RAM Slots:** 4 **RAM Type:** DDR4

**Ports:** USB 3.0 x4, USB 2.0 x2, USB 3.1 x2 (Type A x1, Type C x1),  
HDMI x1, DVI x1, DisplayPort x1

**Size:** ATX

**PCMark 8 (Home):** 4,132 points

**PCMark 8 (Creative):** 4,085 points

**PCMark 8 (Work):** 4,289 points

**Performance:**

**Features:**

**Design:**

**Value:**



## An Affordable Way To Get Your Gaming Rig Up And Running

By Nazrin Zain

ASUS shows you don't need to break the bank for a good gaming motherboard


Thanks to Intel's sixth generation Skylake CPUs, motherboard manufacturers have gone crazy with the amount of motherboards they're making. One such company is ASUS, and with the ASUS Z170 Pro Gaming motherboard, they're looking to push out affordable enthusiast-level components that suits everyone's use.

The Z170 Pro Gaming has four DDR4 DIMM slots, which support up to 64GB of memory, with speeds of up to 3,400MHz when overclocked. For your storage needs, the board also has four SATA III 6.0Gbps ports, one SATA Express port and one M.2 SATA Type 3 port, which supports speeds of up to 32Gbps, for the speediest starts for both your operating system and software. It also has three PCIe 3.0 slots, capable of supporting NVIDIA's SLI and AMD's CrossFireX multi-GPU configuration builds.

As far as I/O ports go, ASUS is quite

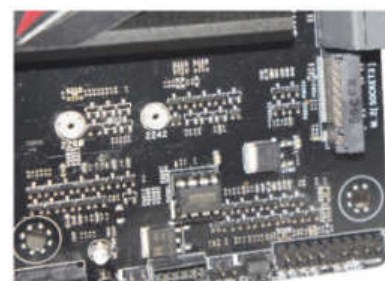
generous as it has included four USB 3.0 ports, two USB 2.0 ports, and one each of USB 3.1 Type A and Type C ports. With the right configuration and devices, these new ports are capable of data transfer speeds of up to 10Gbps, which is twice as fast as the previous USB 3.0 standards.

If you're looking to overclock this board, you'll be happy to know that ASUS has also upgraded its BIOS to make it not only easy to use with EZ Mode, but also put in a variety of optimisation options if you're looking to tweak every little thing in Advanced Mode.

Thanks to these options, overclocking is made easy and highly customisable, as we were able to clock an i7 6770K CPU to around 4.5GHz on air without much of a hassle. With water-cooling loops, we're fairly certain we'll be able to push it even further, as the CPU is quite overclock friendly. 



The Z169 Pro Gaming comes with a variety of I/O ports, including a set of USB 3.1 Type A and Type C ports



The ASUS Z170 Pro Gaming motherboard also comes with an M.2 SATA port, allowing you to install ultra-fast SSDs

+ Performance  
Price

- Lack of  
debugging LEDs

### CHIP CONCLUDES

The ASUS Z170 Pro Gaming motherboard is an affordable piece of hardware that isn't far off from what much more premium models have to offer.

# ASUS STRIX GTX 950

Price: RM879

Contact: Build Technology Supply Sdn Bhd, Servex (Malaysia) Sdn Bhd

Phone: (03) 7955 3699, (03) 8024 6688

Info: www.asus.com/my

GPU: NVIDIA GTX 950

Memory: 2GB GDDR5

Ports: DVI x2, HDMI x1, DisplayPort x1

Slot Size: Double

Fire Strike: 5,830 points

Fire Strike Extreme: 2,921 points

Performance:

Features:

Design:

Value:



## The Tiny Card That Packs A Big Punch

By Nazrin Zain

Game big with this tiny card


It's easy to forget that there is also a market for gamers who aren't necessarily looking for the biggest and most powerful cards around. As NVIDIA announced the latest addition to its GTX 9xx family, ASUS went ahead and slapped on its own STRIX cooler onto the card, and what we have is the ASUS GTX 950 STRIX, a card meant for mid-range gamer who are looking for something that's compact, powerful, but doesn't break the bank.

Featuring a base clock of 1,140MHz, the STRIX 950 also comes with 2GBs of GDDR5 memory, and two modes, which includes Game Mode, with a GPU Boost clock of 1,129MHz and OC Mode, with a base clock of 1,165MHz and a Boost Clock of 1,355MHz.

At the back are two DVI ports, and one HDMI and DisplayPort each, allowing users to connect multiple monitors to the card with ease. As far as cooling goes, the card is equipped with ASUS' DirectCUII Dual Wing Blade fans, which also features the 0dB Fan Design, which means that the fans don't spin until they reach a certain temperature point.

During our tests, the fans indeed do not spin until we ran certain benchmarks, or tested it with some games. While the GTX 950 is engineered to be optimised for games such as Dota 2 and League of Legends, we find that the GTX 950 is still capable of playing many of the current games at HD or Full HD resolutions with a bit of tweaking in the graphical settings menu.

Titles such as The Witcher 3, Metal Gear Solid V and Grand Theft Auto mostly ran above 30FPS on HD, with some bells like anti-aliasing turned down to minimum values. We should also note that while the fans are silent for the most part, turning OC Mode on will yield a considerable amount of noise as the fans go hard at work to dissipate as much heat as possible.

For the users who want to squeeze every bit of performance out of the card, the card also supports ASUS' GPU Tweak II and Gaming Booster, which not only makes overclocking the card easy, but also allows you to up the performance of your PC in just a few simple steps. 



Only a 6-pin PCIe power plug is required to power up the ASUS STRIX GTX 950



The card comes equipped with a suitable amount of video out ports

+ Performance Price — Noisy in OC Mode

### CHIP CONCLUDES

For those looking for a GPU that's good enough to do gaming without all the bells and whistles of the more powerful cards, the ASUS GTX 950 is definitely a card to consider.

# SanDisk Ultra II SSD

**Price:** RM469

**Contact:** Ingram Micro Sdn Bhd, Vector Digital Sdn Bhd

**Phone:** (03) 7940 8888, (03) 2143 2822

**Info:** www.sandisk.com

**Size:** 2.5-inch

**Storage:** 120GB, 240GB, 480GB, 960GB

**Controller:** Marvell 88SS9190/Marvell 88SS9189

**Connectivity:** SATA3 6Gb/s

**Dimensions:** 69.85 x 100.5 x 7.0mm

**Weight:** 58g

**CrystalDiskMark**

**Read:** 523.5 MB/s **Write:** 500.8 MB/s

**Performance:**

**Features:**

**Design:**

**Value:**



By Nixon Ng

## SanDisk Revs It Up


Excellent performance and worth what you pay for

As we all know SSD's are starting to become a staple piece of hardware to put into your rigs. If we see it from a different perspective I guess SSD's can help us save energy, because we believe that most of the time the reasons why users leave their PC on its because they don't want to wait minutes to startup their PC again. But SSD eliminates that issue which encourages users to switch off their computer when it only takes seconds for it to startup again, ergo energy is saved.

The Ultra II comes in a slim 7mm thick design and only weighs 58g, making it a very compact and lightweight SSD. The SSD is available in a variety of storage options ranging from 120GB to a whopping 960GB. While receiving the Ultra II, it came with a simple cardboard box stating its storage size and approximate seq. read and write speeds. Disappointed we were when we saw how it was packaged, an SSD is quite a fragile thing so we hope that in future iterations they would provide better protection for their SSD's. Another thing we didn't like was that it didn't come with a SATA cable nor a bracket



and only came bare with a 9.5mm spacer.

Other than that the SanDisk Ultra II is a Triple Level Cell (TLC) based drive. TLC drives are cheaper to manufacture than Single Level Cell (SLC) or Multi Level Cell (MLC) drives, but are able to hold more data. But the downside to TLC drives are their write endurance which falls short when compared to the other types of SSD's but still offers some form of reliability. The SSD uses a Marvell 88SS9190 controller for its 120GB and 240GB drives while the larger 480GB and 960GB drives uses a Marvell 88SS9189 controller.

Another feature that the Ultra II has is nCache 2.0, a non-volatile write cache feature which makes the Ultra II use a pseudo-SLC caching process, enabling the NAND to run a portion of its data in SLC mode. While benchmarks with CrystalDiskMark reveals the average read and write speed to be around 500-550MB/s, during real life transfers we were only able to transfer at about 400-430MB/s tested on media files and large software and while it falls short of the benchmarks, it is still impressive to see. 



*The SanDisk Ultra II SSD's thin and lightweight build makes it a perfect fit for both desktop PCs and notebooks*

-  Performance  
Variety of storage options
-  No bracket or  
SATA cable provide

### CHIP CONCLUDES

SanDisk Ultra II though built based on the slower TLC NAND, manages to pull off excellent performance thanks to the nCache 2.0 technology.



# Samsung Galaxy Note 5

Price: RM2,699

Contact: Samsung Malaysia Electronics Sdn Bhd

Phone: 1 800 88 9999

Info: [www.samsung.com.my](http://www.samsung.com.my)

Display: 5.7 inches

Processor: Samsung Exynos 7420

Connectivity: WiFi, Bluetooth, NFC, Wireless charging

Memory: 4GB Storage: 32GB

Operating System: Android 5.0 Lollipop

Camera: 16.0MP rear-facing, 5.0MP front-facing

Dimensions:

Weight:

Antutu Benchmark: 67,415 points

3DMark Sling Shot ES 3.1: 1,220 points

3DMark Sling Shot ES 3.1 Unlimited: 1,082 points

Performance:

Features:

Design:

Value:



The Note 5 features an amazing 16.0MP camera that takes truly beautiful shots



The stylus has also been reworked to include a locking mechanism so that it doesn't accidentally drop out from the phone

+ Performance  
Features

- Fingerprint  
magnet

## CHIP CONCLUDES

With the Galaxy Note 5, Samsung has shown the world that premium smartphones are still relevant to the market. Its perfect combination of design and performance will have many yearning for it, despite its somewhat hefty price.

By Nazrin Zain

## Best Note Yet

Samsung's Galaxy Note 5 is a perfect blend of form and substance

Samsung's Galaxy Note line of smartphones have been a constant runaway success for the Korean tech giants ever since its first conception. It has gone through a number of design changes, always following the Galaxy S range of smartphones, and with the Galaxy Note 5, we have a true winner in our hands.

Powered by a Samsung Exynos 7420 octa-core processor, the Note 5 features a huge 5.7 inch display that actually fits in to most palm sizes, thanks to the way the display is maximised edge-to-edge. Featuring a qHD resolution of 1,440 x 2,560 pixels, the screen also features extremely vivid colours that are simply beautiful. It also has 4GBs of RAM and 32GBs of storage which unfortunately is not expandable.

At the back, the Note 5 has a beautiful 16.0MP camera that comes with an LED flash that captures amazing photos, which look great even if you're photographing in low light conditions. The camera also captures 4K video, although it's highly recommended that you only shoot these videos in short bursts and copy them out as storage space on the

Note 5 is a bit limited.

One of the biggest pulls of the Note series is its S-Pen, a digitiser that is used for a variety of purposes, including but not limited to jotting down notes, but also to take screenshots, edit them, and even access shortcuts to your most-used apps. The improved Air Command feature activates as soon as you get the S-Pen out, which now also comes with a clicking mechanism so that it is always locked in place whenever it's placed in the Note 5.

Performance-wise, the Note 5 feels as smooth as silk, no matter how many tasks are hurled at it. Need to check your e-mails while watching a YouTube video? No fret as Samsung's dual-screen feature has got you covered. The phone's 3,000mAh battery life is also super impressive, lasting a whole day and more even with slightly more than just moderate use. A pro-tip: for longer lasting battery, we suggest turning off 4G connectivity if you don't need it. You'll see a significant improvement in battery life when doing this. 📶

# MSI GTX 980 Ti Lightning

Price: RM 3,580

Contact: : JW Power Marketing Sdn. Bhd., Mediaforte (Malaysia) Sdn. Bhd., Advancenet Technology Sdn. Bhd.  
Phone: (03) 2148 1307, (03) 7960 6868, (03) 8070 3633  
Info: my.msi.com

GPU: NVIDIA GTX 980 Ti

Memory: 6GB

Ports: DisplayPort x3, HDMI x1, DVI x1

Slot Size: Double

Dimensions: 330 x 140 x 53 mm

3DMark (Fire Strike): 15,634 points

3DMark (Fire Strike Extreme): 8,585 points

3DMark (Fire Strike Ultra): 3,941 points

Performance:

Features:

Design:

Value:



## Purely For Overclocking Purposes

By Nazrin Zain

MSI's 980 Ti Lightning is an overclocker's dream come true

NVIDIA's GTX 980 Ti is widely lauded as NVIDIA's best high-end consumer GPU to date, and it's not hard to see why. It offers amazing performance levels and is the favourite of many enthusiasts no thanks to its overclocking capabilities. How does one improve on perfection then? MSI has the answer for you in the form of the MSI GTX 980 Ti Lightning graphics card.

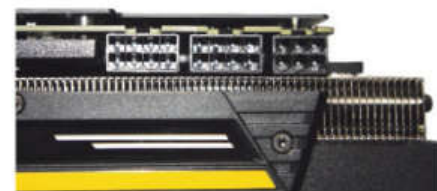
It's been a while since we've last reviewed an MSI Lightning graphics card, and the upgrades that are shown on display here with the GTX 980 Ti Lightning is simply staggering. Out of the box, the GPU core itself is clocked at a whopping 1,304MHz, up by almost 300MHz from the reference card, coupled with 6GBs of GDDR5 memory which is clocked at 7,096MHz.

As far as output options go, the 980 Ti Lightning comes with three DisplayPorts, as well as one HDMI 1.4a and one DVI port. In order to power the GPU, one 8-pin and one 6-pin PCIe power plugs are required, although there is an additional 8-pin port available if you're looking to overclock the GPU even further.

Speaking of overclocks, the GTX 980 Ti Lightning is precision-engineered for such a task, as it features a multitude of features, chief of which is the TriFrozr cooler, made up of three 90mm fans that efficiently cool the GPU and the components that make up the card. MSI has also installed what it calls the Pure Digital PWM controls which enables accurate control and monitoring of power delivery to key components of the card, ensuring that it performs as well as it could,

As if that's not all, the card is also catered for extreme overclockers who use liquid nitrogen cooling to squeeze every last MHz out of the card. To this end, the GTX 980 Ti Lightning has an LN2 switch, unlocking the limits placed on the card's power, current and thermal levels.

Whilst we didn't try to overclock the card with LN2, with air-cooling, we still managed to overclock the GPU a fair bit, up to around the 1,400MHz mark, in fact. The temperature raised a few degrees, but it's still within a safe operating value.



While the GTX 980 Ti Lightning can be powered with 8+6 PCIe power plugs, an extra 8-pin socket is available for overclocking and testing purposes



The GTX 980 Ti Lightning comes with an extra LN2 heatsink for extreme overcooling projects

+ Packed with overclocking features  
- Price

### CHIP CONCLUDES

If you're an overclocking enthusiast, the MSI 980 Ti Lightning is definitely a graphics card you'd want to invest a pretty penny on. There aren't many like it just yet in the market, making it one of the very few cards out there in the market that caters to extreme overclocking.

# HTC One E9

**Price:** RM1,899  
**Contact:** HTC Careline  
**Phone:** 1 800 88 9855  
**Info:** www.htc.com/sea

**Display:** 5.5 inches (1,440x2,560)  
**Processor:** 2.0GHz Mediatek Helio X10  
**Connectivity:**  
**Memory:** 3GB  
**Storage:** 32GB (expandable to 128GB via MicroSD)  
**Operating System:** Android 5.0 Lollipop  
**Camera:** 20MP rear-facing, UltraPixel front-facing  
**Dimensions:** 156.5 x 76.5 x 7.5 mm **Weight:** 150g

**Performance:**  
**Features:**  
**Design:**  
**Value:**



## As Good As It Comes

By Nazrin Zain

HTC's One E9+ is a good phone in its own right

Not long after announcing and launching its flagship M9+, HTC also introduced a brand new mid-range smartphone in the form of the HTC One E9+, for those who don't necessarily need an expensive phone, but would still like to have some of the bells and whistles that are offered on said device.

Despite its polycarbonate back cover, the One E9+ takes a lot of design cues from its bigger brother, the HTC One M9+. The 5.5 inch display is matched together with metallic accents at the sides, and a chamfered bezel design that gives the One series its iconic look.


Powered by a 2.0GHz Mediatek Helio X10 octa-core processor, the One E9+ also sports 3GB of RAM and 32GBs of storage, which can be expanded up to 128GBs via a microSD card. Out of the box, it runs Android 5.0 Lollipop, which comes with HTC's own Sense 7.0 UI which has seen more work put into it to fit into Android's Material design scheme.

HTC has always been hard at work with its camera technology, and it shows in the E9+, as it features a 20MP rear-facing camera that captures some amazing shots in a variety of lighting conditions and creative manner, thanks to HTC's Eye software that

provides an excellent array of editing tools for your photography needs. The front-facing UltraPixel camera also does an excellent job at taking wide-angle photos, perfect for those who love taking group shots with their friends and family.

Performance-wise, the One E9+ performs as well as can be expected. For the most part, apps run smoothly with minimal lag, although that being said, run too many apps in the background, and some noticeable performance drops can still happen.

One great feature that got retained from the One M9+ is the HTC BoomSound front-facing speakers, which delivers the same rich audio experience from the flagship phone, right on the One E9+.

As for the phone itself, thanks to its 5.5 inch display size, it can feel wide and tall for people with smaller hands, making it a bit difficult to use. It has a relatively large 2,800mAh battery that is unfortunately not removable. At full charge, the phone is able to last you throughout most of the day on average use. To save more battery charge, we also recommend that you turn off LTE connectivity if you don't need it. 



The HTC One E9+'s 20MP camera is great for taking a wide variety of photos and videos



The phone also comes with dual SIM card slots for those who carry more than one number around

+ Performance Similar features to One M9+      - Size may not fit all

### CHIP CONCLUDES

The HTC One E9+ offers a set of features similar to that of the One M9+, but at a much lower entry fee. Its design sense is not too far off that of the flagship, and its performance levels aren't all too shabby either.



# ASUS B150 Pro Gaming D3

**Price:** RM572

**Contact:** Build Technology Supply Sdn Bhd,  
Servex (Malaysia) Sdn Bhd

**Phone:** (03) 7955 3699, (03) 8024 6688

**Info:** www.asus.com/my

**Slot:** Intel LGA 1151

**CPU:** Intel B150

**RAM Slots:** 4

**RAM Type:** DDR3

**Ports:** USB 3.0 x4, USB 3.1 x2 (Type-A x1, Type-C x1), HDMI x1, VGA x1

**PCMark 8 (Home):** 3,669 points

**PCMark 8 (Creative):** 3,823 points

**PCMark 8 (Work):** 3,568 points

**Performance:**

**Features:**

**Design:**

**Value:**



## For Simple Needs

ASUS shows that you don't need an expensive motherboard to build a PC



I/O ports are a bit scarce on the motherboard, however it does come with two USB 3.1 ports

Looking to upgrade to Intel's new Skylake platform, but don't want to spend unnecessary money on expensive new hardware? ASUS continues to launch motherboards for every enthusiast segment, and with the B15 Pro Gaming D3, it comes with a surprising new feature that not many manufacturers have exploited yet.


The first thing you're likely to notice about the B150 Pro Gaming D3 is that the memory support for it is listed as DDR3 instead of DDR4. Fret not as the new Skylake processors do support backward compatibility with the old RAM format, although this falls on the manufacturers to implement. This also means that DDR4 cannot be used on the motherboards as they are physically incompatible.

As far as the rest of the motherboard goes, the B150 D3 features six SATA III ports, and one M.2 SATA port. It also has two PCIe 3.0 slots that can accommodate for AMD's CrossFireX multi-GPU configuration, although strangely enough not for NVIDIA's SLI.

At the back, the I/O configuration of the motherboard is also a bit scant, as it only


has four USB 3.0 ports, one each of Type-A and Type-C USB 3.1 ports, as well as a VGA and HDMI port, as well as an Intel Gigabit LAN port. Whilst it's great that it has support for USB 3.1, you won't be plugging in too many devices to your PC if you're using this motherboard.

The B150 D3 motherboard performs as well as can be expected, although this being a B-series motherboard, and overclocking via adjusting the multiplier is not an option. That being said, its BIOS software is straightforward and easy to use, and any low-level adjustments that you need to do can be done there.

That being said, it does come with its own set of bells and whistles, including electrostatic discharge guards (ESD Guard), where each port is protected against static electricity that could damage the components on the motherboard, as well as SupremeFX, which is ASUS' audio technology that delivers high-fidelity audio, perfect for music-listening and gaming, especially with FPS titles like Counter Strike, Call of Duty and Battlefield. 



The motherboard supports AMD's CrossFireX multi-GPU configuration, but not NVIDIA's SLI

 Affordable

 No NVIDIA SLI support

### CHIP CONCLUDES

If all you're looking for in a motherboard are the basic necessities to build an inexpensive gaming PC, the ASUS B150 Pro Gaming D3 is worth a consideration. Its support for DDR3 RAM means that you don't have to shell out for expensive memory, allowing you to save a bit of cash for that Crossfire GPU build.

# PowerColor R9 390X Devil

Price: TBA

Contact: Achieva Technology Sdn. Bhd.

Phone: (03) 7955 1768

Info: [www.powercolor.com](http://www.powercolor.com)

GPU: R9 390X

Memory: 8GB GDDR5

Ports: DVI x2, HDMI x1, DisplayPort x1

Slot Size: Triple

Dimensions: 285mm x 140mm x 63mm

3DMark (Fire Strike): 12,391 points

3DMark (Fire Strike Extreme): 5,432 points

3DMark (Fire Strike Ultra): 3,219 points

Performance:

Features:

Design:

Value:



By Nazrin Zain

## A Chilly Devil

PowerColor's R9 390X Devil is a cool, powerful GPU

**A**MD's R9 390X may only be a rebadge of the company's previous flagship R9 290X graphics card, but PowerColor has added its own set of special features onto it to turn it into another compelling product that enthusiasts would definitely want to get their hands on. Introducing the PowerColor R9 390X Devil.

The R9 390X Devil graphics card is unlike many other similar models in that PowerColor has stuck a water-cooling loop on the card. Decked in an all-black chassis, and slightly overclocked the card's GPU from the stock 1,050MHz to 1,100MHz. Similar to the stock R9 390X, the Devil also comes with 8GBs of GDDR5 RAM.


The R9 390X Devil utilises a hybrid liquid-cooling system, where suck in air to cool down the VRMs and other components, while the GPU itself is cooled by a liquid-cooled radiator which sports a 120mm fan to dissipate the heat away from the radiator.

To power the Devil and the reservoir, an 8-pin and a 6-pin PCIe plugs are required,

which at its highest power draw, requires roughly around the 300 to 350 Watt range, which is pretty high. As far as ports go, the R9 390X Devil comes with two DVI ports, and one DisplayPort and HDMI port each.

One thing we do need to mention is that the card is very large. The card alone eats up three PCIe expansion bays, and the inclusion of a radiator means that your chassis needs to be relatively large to be able to fit the card.

As far as performance levels go, the R9 390X Devil does very well, posting reasonably high scores in our benchmarks, whilst keeping temps low, to roughly around the 60 to 70 Celcius mark. Overclocking this card is also of no issue, as the water-cooling loops keeps the GPU cool enough even as you push it to the limit.

That being said, the price of keeping the card cooled comes at the price of noise. The radiator and the fan creates a fair bit of noise as the GPU is pushed while gaming or overclocking, although in our opinion it doesn't affect much in way of immersion. 



The radiator that helps cool down the Devil's fiery wrath



An 8-pin and 6-pin PCIe power plugs are required to power the R9 390X Devil



Performance  
Cooling



Size  
Noise

### CHIP CONCLUDES

The PowerColor R9 390X graphics card is a great card to have if you can't find the rare R9 Fury or Fury X cards in the market. The fact that PowerColor made a water-cooled version of this card shows that there is still life in a relatively dated GPU chipset.

# MSI R9 390X GAMING 8G

**Price:** RM 2,080

**Contact:** JW Power Marketing Sdn. Bhd., Mediaforte (Malaysia) Sdn. Bhd., Advancenet Technology Sdn. Bhd.

**Phone:** (03) 2148 1307, (03) 7960 6868, (03) 8070 3633

**Info:** my.msi.com

**GPU:** AMD R9 390X

**Memory:** 8GB

**Ports:** DisplayPort x1, HDMI x1, DVI x2

**Slot Size:** Double

**Dimensions:** 277 x 129 x 51 mm

**3DMark (Fire Strike):** 11,354 points

**3DMark (Fire Strike Extreme):** 5,214 points

**3DMark (Fire Strike Ultra):** 1,375 points

**Performance:**

**Features:**

**Design:**

**Value:**



By Nazrin Zain

## It Ain't Heavy, It's My Graphics Card

MSI shows that the R9 390X isn't just a rebadge

AMD's latest line of Fury and Fury X graphics cards may have hogged the limelight with its new HBM memory architecture, but the products themselves are currently very scarce in the market. With that in mind, AMD also announced the new R9 3xx series of GPUs, based off the previous-gen cards, but with more memory. MSI took this opportunity to slap on its own brand of coolers on the R9 390X, for those who are looking for a high-end upgrade.

As mentioned previously, the R9 390X is an improved version of the previous R9 290X graphics card. What MSI has done is to increase the Hawaii GPU's clock speed up to 1,100MHz from the stock 1,050MHz, and added 8GBs of GDDR5 on board the card.

Doing such a thing may yield better performance numbers, but MSI has also slapped on its latest Twin Frozr V coolers on board, featuring redesigned cooling fins and a new set of Torx fans that is capable of pushing air onto the fins that much more to dissipate heat from it. Not only that, the fan's Zero Frozr fan system works fantastically well here, with the fans not spinning at all until we unleashed it on some powerful benchmarks and games.

The card features two DVI ports, one

DisplayPort, and one HDMI port for video connectivity, while one 8-pin and one 6-pin PCIe power connector are required to power up the graphics card.

A thing to note when you're looking to install the MSI R9 390X is that thanks to the new Twin Frozr V cooler, its weight is significantly increased, which means it has a higher chance of bending and warping. We recommend securing the card properly by screwing it tightly to the case's PCI expansion bay, while securing the card to a post of some sort in the chassis.

Performance-wise, the MSI R9 390X is certainly a very powerful card. Whilst it certainly did quite well in our 3DMark 4K tests, the card is more suited for high-end 1,440p gaming at above 60FPS. Games like Shadow of Mordor, Arkham Knight, The Witcher 3 all ran exceptionally well at this resolution, even with a lot of the graphics settings turned up to maximum.

Power-consumption-wise, the MSI R9 390X is a thirsty card, and draws over 350W of power when it's running at full tilt. You'll definitely need a pretty powerful power supply to get this card running at its full potential, without worry.



An 8-pin and 6-pin PCIe power plugs are required to power up the R9 390X



One of the reason for the MSI R9 390X's weight is its large heatsink

+ Performance Cooling      - Power consumption Weight

### CHIP CONCLUDES

The MSI R9 390X is certainly a powerful card. Although that being said, it is power-hungry and is one of the heaviest cards of its size that we've tested so far.



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\_\_\_\_\_

Cut out this section and mail to:

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GEEKMOMMY

# Take 5 with Geek Daddy

*GeekMommy recently caught up with newly minted geek daddy and thought it would be nice to share about his fatherhood experiences to the readers here* By GeekMommy



educational apps for our child when he is old enough.

## What gadget would you be comfortable to expose your baby to when they grow up and why?

We would probably expose the child to a tablet first as there are a lot of learning tools with all the various educational apps. I've been a gamer all my life and there is a chance I would introduce him to games starting with Nintendo games as they are mostly nonviolent. But I do hope to be able to balance it out so that the child won't be over exposed to technology as he should also be active and spend time playing outdoors like other children his age would.

## Would you like to share any tech tips on parenting?

Having been a writer, it was natural that I felt compelled to document my child's journey. I started a blog shortly before his birth and have been chronicling my journey with him. I hope to write often and include videos of him. But I do hope to introduce him to the blog when he is old enough to read and show him what he was like when he was an infant. 📷

## How did you capture the arrival of your newborn?

My primary gear in documenting the birth of my child was a Sony A7 DSLR, GoPro Hero4 Silver and my Xperia Z3 smartphone. Both devices had NFC or WiFi connectivity so I was able to share to my smartphone. Majority of footage was eventually transferred for use in a video I assembled using Final Cut Pro X a day later. I was actually very prepared to capture the big moment when the baby arrived but the hospital had a strict no photo policy during the birthing process that I had to comply with.

## What life saving gadgets did you use during your early days of parenthood?

I used my phone to take pictures of the baby, keep track of time till the next feed. Occasionally, I would play some nursery rhymes or songs with an external bluetooth speaker that I link with my phone. I was gifted a baby monitoring system to help monitor the baby when I am not in the room too.

## Did you use any apps during your wife's pregnancy or right now for your baby?

At the moment, we are not using any particular apps. At the very most my wife uses the default timer app on the smartphone to remind her when it is time for her to express milk as she is breastfeeding the baby. Perhaps in the future we would introduce

*Geek Daddy maintain a blog named Dadhood Diaries. Read more about his fatherhood adventures at [chongjinnxiung.wordpress.com](http://chongjinnxiung.wordpress.com)*



EVENT



# A Visually Spectacular Event

*Visual Arts Expo 2015 brings in some of Japan's most popular animators to Malaysia*

By Nazrin Zain

The visual arts scene in Malaysia has been around for a very long time. Even way back in the 90s, with mangas such as

Doraemon and Dragon Ball dominating the hearts and minds of children young and old alike. Ever since then, the Japanese animation

industry has grown from strength to strength, and today, anime and manga are one of the most watched and read forms of entertainment in the world.

That said, the appreciation for the work behind the scenes in making this art form possible has often been neglected by many fans, and an enterprising group of people in Malaysia are looking to fix



One of the many fan panels that were held throughout the three days at VAX



Movie posters of Shingeki no Kyojin and various other movies can be seen at VAX





A LEGO Star Wars diorama is one of many interesting that can be seen at the display area



A LEGO build of Batman's Batwing plane on show

that by bringing a number of Japan's most celebrated animation studios to Malaysia so that fans get to know more about the behind-the-scenes process of how anime and manga are typically made in Japan.

Held for three days from the 21st to the

23rd of August, Visual Arts Expo aimed to gather both industry professionals and fans of all things visual arts, be it comics, animation and video games to share their thoughts and interests with one and all.

To that end, Valkyrie Creative Solutions, the organisers behind the inaugural Visual Arts Expo have brought in Japanese animation studio Gainax and Satelight to show off their latest works, and to educate local fans in the methods used to create a visually stunning story.

From Gainax, its CEO Hiroyuki Yamaga took time off from his busy schedule to come over to the event and showcase some of his company's amazing works, including the likes of Neon Genesis Evangelion, Gunbuster, Gurren Lagann and Houkago no Pleiades.

Satelight meanwhile came down to Malaysia with its president in tow, Michiaki Sato, who also brought legendary anime director Shoji Kawamori, who is the key mind behind shows such as Super Dimensional Fortress Macross, Visions of Escaflowne and Genesis of Aquarion to share his thoughts about the creation process of such titles.

Besides stage events with the leaders from these two animation companies, Visual Arts Expo also held fan-related events in the form of panels that are held by fans for the fans. Some of these panels include very fun topics, such as the Top 10 Most Powerful Gundams, attending idol concerts in Japan, wrestling, and more.



GAINAX's upcoming movie, Uru in Blue looks set to be Gainax's next big hit



Keitaro Arima, mangaka for Tsukuyomi Moonphase also made his way to VAX, and showed off some of his works there


Art students and professionals also stand a chance to get some personal time with Yamaga, Sato and Kawamori as they look through portfolios, and give some pointers how to advance in their careers. When asked about the quality of Malaysian animators, all of them agreed that these are some very talented people who just need that extra spark to push themselves forward to do bigger and better things.

On top of that, local animation studios, such as Wau Animation, GLUE Studio, Les Copaque and Animasia were also at the event, showing off their best and latest works. The companies also had their time on the stage to give keynote speeches to the crowd about their projects and what they're looking forward to in the future.

Shoji Kawamori also went on stage to deliver a talk on how he first thought of the idea to create Macross, and his thought process behind some of his best mecha creations, such as the Valkyries in particular.

As interesting as the industry talks may be, VAX also invited a number of big-name artists to come and liven the event up with a mini concert. Guests such as BACK-ON, who sang the theme songs for Gundam Build Fighters, Aimee Blacksclager of Aldnoah/Zero fame and Ladybeard, a Japan-based Australian wrestler

with a penchant of wearing cute, frilly clothes whilst singing to metal covers of popular anime songs.

This ambitious first-time event was attended by an estimated count of 2,500 visitors, and it is hoped that they will continue to host this event next year as well, and bring in an even more varied number of creative publishers from the Western side of the world as well, perhaps Marvel and DC, and continue to include even more visual arts categories such as movies and perhaps video games too. 



GAINAX's booth houses a lot of big hits of old, such as Neon Genesis Evangelion, Gunbuster and Mahoromatic



## PEOPLE

# Ladybeard

*Sing, Dance And Destroy* By Nazrin Zain

**L**adybeard is an internet sensation back in Japan. Chances are, if you've been in the internet for the past half a year or so, you may have at least heard of the guy. Thanks to his his unique combination of machismo and moe have garnered him fans not only the Land of The Rising Sun, but also from around the world. He was recently invited as a performing guest at Visual Arts Expo, and we managed to get some time from his busy schedule to talk about his career as an entertainer.

**Could you give us a brief introduction to our readers who may not have seen or heard about you?**

My name is Ladybeard, I'm from Australia, but currently live in Japan where I am a pro wrestler, heavy metal singer, idol and genki presenter.

**How long have you lived in Japan?**

I've been living there for two years. Previously I used to stay in Hong Kong as they had a professional wrestling circuit there. But after my popularity as Ladybeard skyrocketed, I decided to move over to Japan, and I've never looked back since. Picking up Japanese isn't as difficult as Cantonese, because the language doesn't have really have any grammar, so to speak. Like any language, if you have no choice but to speak it, you'll find yourself picking it up rather quickly.

**One of your latest crossplays was as Chun Li of Street Fighter at Comiket. Was that your first experience attending the event? How did it feel?**

My first Comiket experience was actually a couple of weeks after I arrived in Japan. I was there as just a visitor, and the sheer scale of the event just blew my mind away. Now typically for my photoshoots, it's usually in a studio, where the photographer will be there, take a few shots, and I adjust as need be. Comiket in comparison is a whole different beast altogether.

When I crossplayed Chun Li at the recent Summer Comiket, the experience was quite insane. Imagine a wall of photographers with their fancy cameras and lenses all taking photos of you, and when someone leaves, other people take their place, and it just goes on and on. I literally had to do Kung Fu poses for two hours continuously, and by the time it was mid-afternoon, my costume was literally drenched in sweat, so it was quite challenging.

I highly recommend it because it builds character, and will challenge you quite a fair bit.

**So how long have you been maintaining your beard for? What advice can you give to those who want to maintain such a wonderful beard?**

That's a very good question. I made the terrible mistake of shaving off my beard around five years ago, and it was a relatively sad period of life for me. I think the most important things when it comes to beard maintenance is actually a healthy diet and exercise, because that will cultivate proper health and







improve hair growth and so forth.

It's also important to meditate on your beard growth, I feel. I do meditation for my beard at least three times a week, which is also crucial to my foundation of having a healthy beard. There is an element of zen in maintaining the perfect beard, as well, I feel.

### You mentioned earlier that you moved to Japan from Hong Kong. What made you switch?

That's an interesting question. The Ladybeard Project, in its current form actually started in Hong Kong. So I was in Hong Kong wrestling, doing my kawaii-core show, and after every show, people come up to me and they always have the same two comments. First, 'I've never seen anything like that before', and secondly, 'The Japanese would love you'.

So I organised my own Japan tour in 2011, I did six shows; three in Tokyo, one in Osaka and two in Okinawa, and they were right. The locals loved it, they really did. I got such a positive response from the Japanese, plus I really liked Japan, so from there I moved over.

This worked out for me as my career in Hong Kong had reached a plateau and did as much as it could for me, so I had to move on somewhere. So I decided to move to Japan, which I felt was the place for me.

### Did you ever thought that this gimmick would have caught on as much as it has right now? How did this whole thing started?

Yes. When I was 14 years old, I went to a dinner party that was hosted by the school. Everyone turned up wearing their school uniforms that they wore every day. I found that to be a bit boring because I'm already wearing it to school every day, so the last thing I wanted to do was to wear it on a weekend.

I thought it would be hilarious to put on my big sister's school dress to the party. So I turned up at the party wearing the school dress, and my friends were all like 'Aaahh!! You're wearing a dress!' and it was a hilarious night, everyone had fun, and that was that.

### What inspired you to start the Ladybeard Project?

Well, because it's fun, really! The whole thing has been a culmination of my life experiences up to this



point, coming together to create the Ladybeard of today. The biggest clicking point would have been that moment when I started crossdressing when I was 14, I felt that it was a lot of fun, and went on from there.

### Could you tell us about your group, Ladybaby?

Ladybaby started sometime end of last year. I was on the cover of a magazine in Tokyo, and the CEO of this costume-making company saw the magazine with me on it, took it back to his company and asked around who I was.

Unknown to him, I had actually worked with his company a few months back, so some of his employees recognised my face and told him who I was. The CEO then asked to have a meeting with me, and said 'I think you're awesome. We want to do something with you'.

A few weeks later we got a call for another meeting, and were handed documents of two other girls. The CEO wanted me to group up with these two young girls and sing and dance cutely, while I provide the screaming vocals.

We shot a PV, and when it was uploaded onto the Internet, the hope was for that the Ladybaby project would be popular enough to help the company push its costumes. While that did happen, we noticed that the global reception was insane! We had like three million views in three days, and we couldn't believe our eyes. The CEO didn't know what to do next, but it was really an eye-opening experience for us as it is for the viewers. 🇨🇦



# Locking People Out In Style

*Every day we look at our phones and are satisfied, but there are those out there who want more than what stock lockscreens can offer. These are a few lockscreens that will allow you to unleash your inner most needs, offering countless ways to customise and innovative ways to control your experience to get the most from your smartphone* By Nixon Ng

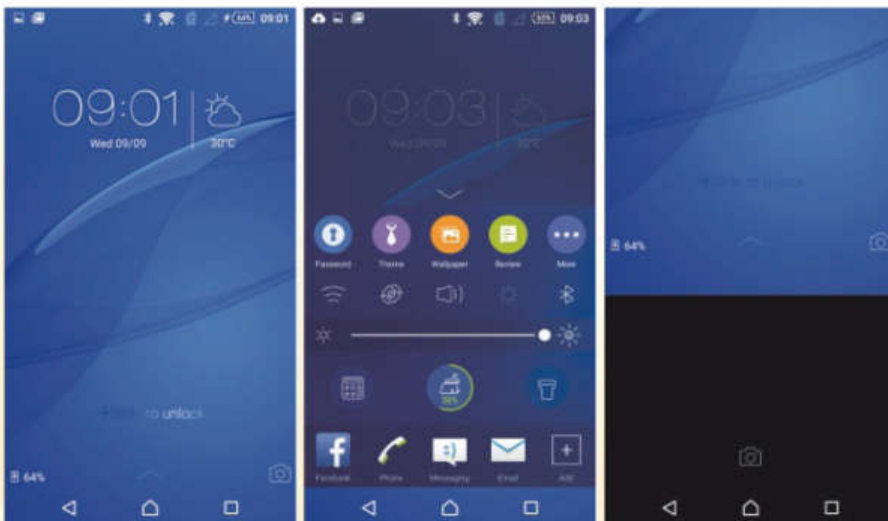
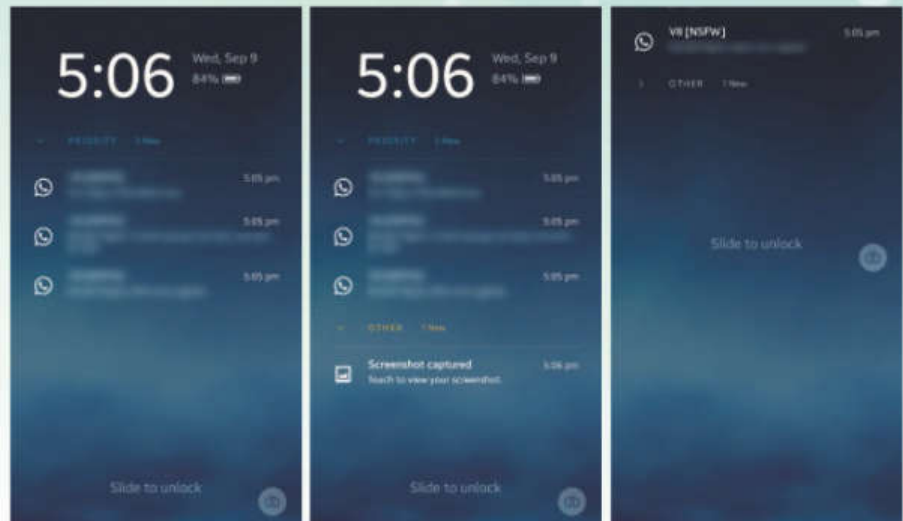
## Echo Notification

TEcho Notification is one of the fastest lockscreens available and also a featured top app in Google's Play Store. Sporting a minimalist design, Echo Notifications barely has any effect on battery life with its simple UI, but Echo's true forte lies in how

notifications are managed choosing to display notifications in full instead of a summary. With features such as music

control without unlocking, automatic grouping of notifications from the same app, and snooze notifications allowing you come back to notifications at a later time. Echo

Notification is an easy to install and personalised lockscreen you shouldn't miss out on.



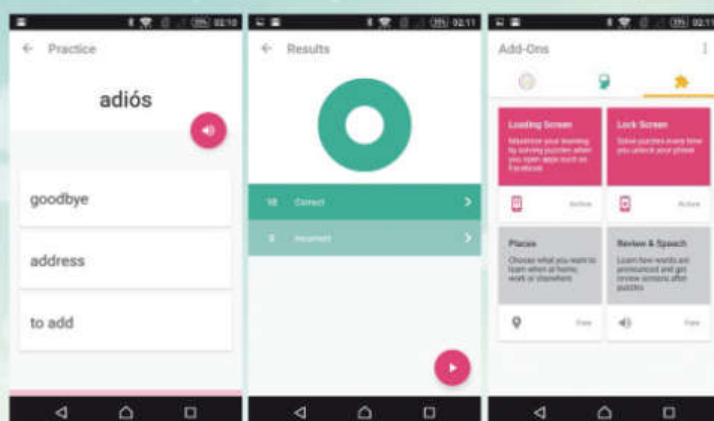
## CM Locker

CM Locker is a quaint little lockscreen which brings a simple and iOS-esque feel to your Android smartphone. With many features alike to iOS it's hard not to grab this lockscreen if you enjoyed an iPhone before. Such as the quick slide-up menu which you can use to launch the calculator and toggle the WiFi. You can even swipe the camera icon upwards to take a quick photo that you can use as a wallpaper. Another nice feature, is its quick reply for Facebook Messenger from the lockscreen and they plan to add more IM apps to be supported in the near future.



### Next Lock Screen

Next Lock Screen is a Microsoft Garage project, designed to minimize the amount of times users need to unlock their phone. Messages, emails and calendars all on the front of your lockscreen and can be accessed instantly. One of its amazing functions is its quick app launch feature which allows you to open apps just by double-tapping, and you can configure and organize the apps to profiles for your different needs. You can also set your unlock method such as sliding, PIN or pattern.

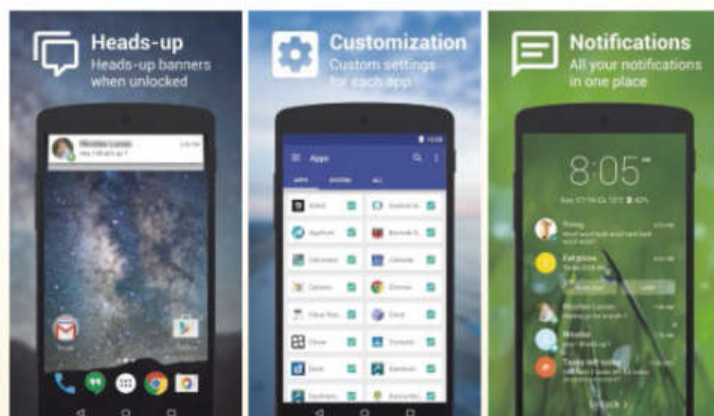
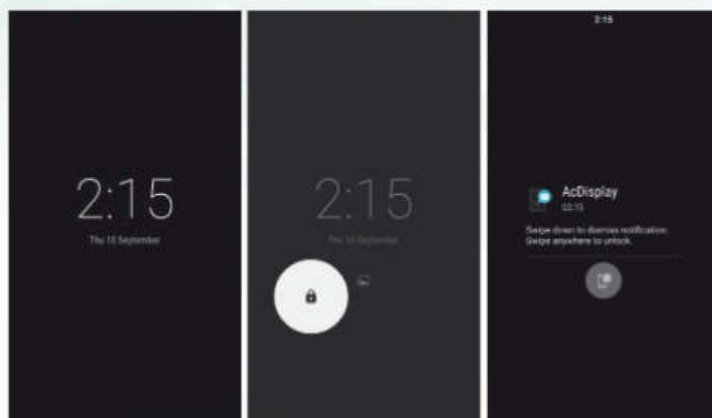


### Semper: Learn Effortlessly


Semper is a pretty exciting lockscreen, developed to let you learn while using your phone. Every time you unlock your screen or launch an app, Semper will give you a short language, math or knowledge puzzle to solve. It will take a bit of time to set-up but you can download plenty of free packages for different topics or languages. You can learn vocabulary in 50 languages with over 2,500 expert-made language packs. So if you are willing to bust your brains a little bit to unlock your phone or launch apps, Semper is a great tool to help you take the first steps in learning a new language.

### ACDisplay

ACDisplay is a lockscreen with the minimalist in mind, with a new way of handling notifications in Android. It comes with an active mode which uses your phones sensors to wake your device up when you need it, which works great when you pull your phone from your pocket to get a quick glimpse of your notifications. The lockscreen is incredibly stable and doesn't use much battery, and highly customizable, with settings such as blacklisting, dynamic background and being able to set the priority of notifications ranging from low priority to critical and urgent.



### SlideLock Locker

SlideLock Locker is a simple and clean lockscreen with a powerful notification feature. You can swipe to the right to unlock or swipe left and access the camera. SlideLock Locker has actionable detailed notifications, where you can either double tap to open said notification or swipe to dismiss it. It is capable of PIN and pattern security and the screen wakes up for a short time whenever a notification is received. You are able to customise your settings for each app(sound, vibration, etc...), and with low battery usage make SlideLock Locker one of the best lockscreen replacements. 

# METAL GEAR SOLID V THE PHANTOM PAIN

## A Grand Farewell To The Metal Gear Franchise

By Nazrin Zain

**T**he Metal Gear series of games are the stuff of legend. Growing up with a PlayStation as a kid, it was one of the most challenging titles for me to play at the time. Thinking back, I probably wasn't really able to appreciate what a truly awesome experience it was, sneaking around bases, hiding in plain sight from enemy view, and then putting them to sleep with tranquiliser guns.

The game has clearly evolved over the years, and Metal Gear Solid V: The Phantom Pain is the culmination of all that Hideo Kojima, famed creator of the series could possibly ask for. It is also his swansong, one that many gamers throughout the world will remember as the title the Japanese video game maestro put his blood, sweat and tears into to make possible.

### The Phantom Pain

The events in The Phantom Pain occurred years after the incident in Ground Zeroes, the

playable demo that came out some time before MGSV did. Big Boss awoke from a coma, and was immediately attacked by XOF, a group from Snake's past hell-bent on killing him off for good, after they failed to do so when Snake's Mother Base was blown up by them.

Sneak eventually recovered, and after saving Kazuhira Miller from Russians who have conquered most of Afghanistan, set out to get his revenge on XOF.

The game itself starts off superbly well. The prologue in particular was very nerve-wracking as you guide a mostly disabled Snake through a hospital corridor, trying to get away from soldiers who have come to kill you. You'll eventually be forced to ride on horseback and the scene that comes after is nothing short of amazing.

### The Game

The game itself is separated into a number of

sections: the main game, where you take on missions to move along the story, and building Mother Base. Both of these sections are deeply intertwined with one another. In order for you to progress through the game comfortably, it is in your best interests to take care of things at your new Mother Base as well.

As far as the main component of the game goes, it is the same Metal Gear Solid we all know and love, with a few big upgrades as well. As a new startup PMC, you're equipped with a tranquiliser gun, and a horse for you to travel around.

Right at the get go, you have a choice to either go the tried-and-true stealth route, or the Rambo route, going in all guns blazing. For the first few missions, we find stealth to be the easier route, as you familiarise yourself with the game mechanics and the world itself. Moving from one checkpoint to another takes a lot of time, so the horse that you're provided with



really helps you save a lot of time.

After saving Kazuhira Miller in the first chapter, you will have the ability to extract downed enemies away on mini balloons. This process is called Fulton, and this is how you will grow your Mother Base, while clearing missions at the same time.

While its main purpose is to forcibly recruit soldiers to your army, it also has the secondary purpose of clearing maps of enemies. Recruiting these soldiers also help improve your tech tree, which is important for upgrades that make your work in the game that much easier. Some of these soldiers can rank highly depending on their specialties, so it would be in your best interests to interrogate soldiers to see if there are any specialists in the area that you can capture.

In the early game, killing soldiers isn't recommended, mainly because the soldiers can quickly gang up on you if they hear your gunfire. Secondly, dead soldiers are useless and can't be

conscripted to your army, with the added downside of if they are discovered, the soldiers will raise alarms, looking out for you.

The tranquiliser gun will most likely be your friend for quite a while throughout the game, and while it is a bit awkward to use at first, you'll eventually get used to it, scoring headshots every time

you aim it at a soldier. Be warned however, the soldiers will eventually wise up to your tactics, and wear protective headgear, forcing you to aim at other vulnerable bodyparts.

## Partners

Throughout the game, you have partners who will help you clear the missions. First off is the D-Horse. He's basically your transportation system before you're able to Fulton vehicles away, and will come by to your side mere seconds after you whistle for him.

D-Dog, meanwhile is a scout dog that helps you locate enemies inconspicuously.




You originally Fulton him to Mother Base as a puppy, and after some time passes, Kaz Miller will have trained him as a soldier dog.

Quiet meanwhile is a super sniper that can teleport from one location to another. She's also the soldier who tried to kill you in your bed, before Ishmael helped you by setting her on fire during the prologue. You unlock her in one of the missions where you have to defeat her in a boss battle of sorts. Whilst you will originally keep her as a prisoner, she will eventually become sympathetic to your cause and join you, sniping your enemies from afar and taking them down without you having to do much.

## Conclusion

Metal Gear Solid V is a massive, massive game, with each mission compartmentalised into 'episodes', with there being more than 40 episodes for you to play. Each episode lasts roughly from half an hour to two hours long, and is sure to keep you occupied for quite some time, if you're like me and are only playing one episode a day. Sidequests in the form of side ops are also available for you to rake in GMP for you to upgrade your gear and base.

There's also the PVP mode where you raid other players' base for resources, and soon, there will even be a Metal Gear Online feature where you can group up with other players to play against one another.

The game is just full of activities to do, and at times, it does feel overwhelmingly so. But if you're big into the Metal Gear lore, it is definitely a very worthwhile investment in money and time to get what many consider to be the last game in the saga. 



# Metal Gear Solid V: The Phantom Pain

**Genre:** Stealth, Action

**Developer:** Konami

**System Requirements Platform:** PC, PS4, Xbox One

Excellent  
+ gameplay  
Replayability

Can feel  
- overwhelmingly  
long at times

**Gameplay:**  
**Graphics:**  
**Sound:**  
**Replayability:**







# Make Your Old Hardware Look As Good As New

*As time progresses, computers will start to gather dust, slow down and become unstable. These tricks will help you bring them back up to speed* By Christoph Schmidt

Prolonged usage of electronics typically end up worse for the wear than otherwise. Hardware gets worn out, and the software experience suffers with new installation processes and increased levels of driver utilization. That said, these signs of old age do not necessarily have to mean that you need to switch to new hardware. With the help of these tips, you can ensure that your devices look and function brand new, even after months or years of usage.

The simplest and quickest tricks involve software optimisations for PCs, which we'll get to first. Problems such as incorrect BIOS settings, auto boots and unnecessarily installed software can be solved using

the tools that can be found on the internet. When dusty and worn-out hardware starts slowing down the system, you should use cleaning agents and tools to make the cooling system fully functional.

When it comes to Android smartphones and tablets, there are effective clean-up operations for the software, the cache and the memory space, which can fix many issues and solve many problems. Since mobile devices have no moving parts and are hard or impossible to open, the only thing you can do on the hardware side is replace the battery and implement mechanical protective measures to protect the device against further damage.

# Finding and Eliminating PC Issues

## 1 Optimise BIOS

During the boot-up phase, call up the BIOS page by pressing the corresponding key on the keyboard. In here, locate and disable the RAM Test option by enabling the QuickBoot option in the BIOS menu. Make sure that your boot drive (usually C:) is set as the priority boot drive. Also ensure that your drive is set to run on AHCI mode as well, for faster boot times.

## 2 Clear Out Startup Processes

One of the major reasons why computers start up slow is because of extra startup processes. In order to speed up the boot procedure, open up the windows search menu with "Winkey"+"R", and type in "msconfig". Click on the "Services" tab and and click on the "Block all Microsoft Service" option and click "Deactivate all". Reactivate only important services, such as the ones belonging to your anti-virus software and tools that should always be running. Click "OK" and then restart your computer.

### 3 Clean Up Your Harddrive

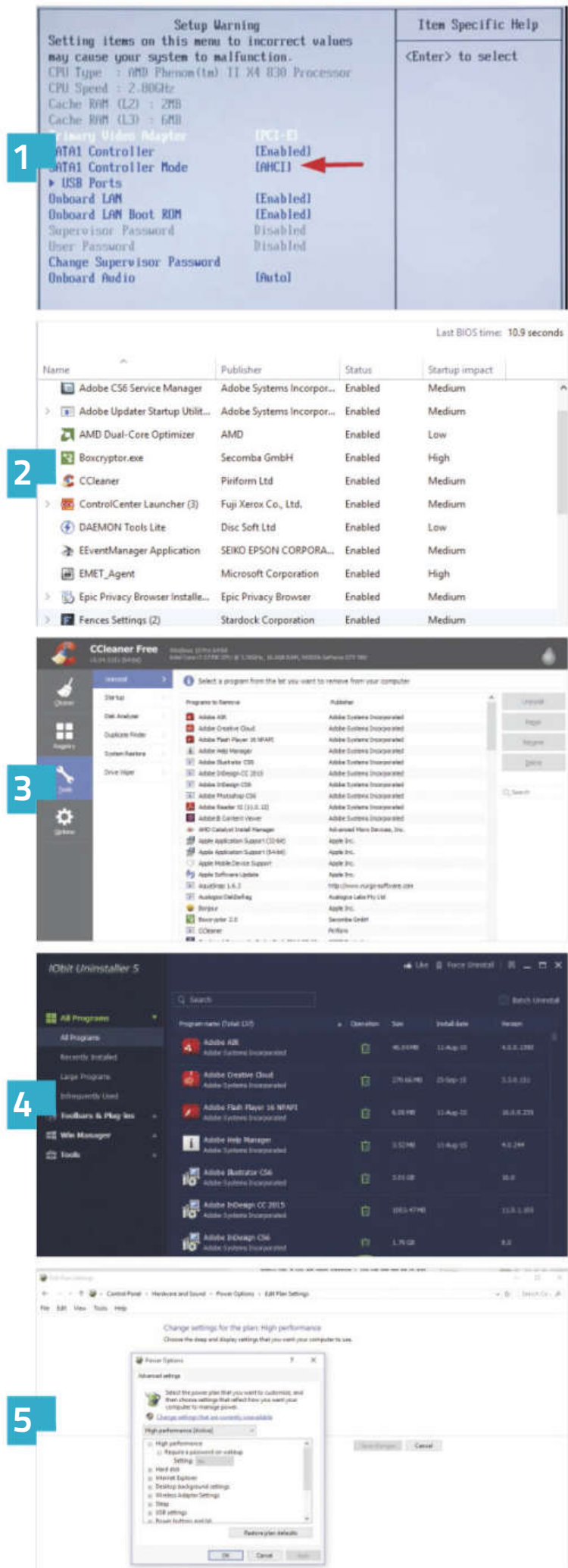
Storage drives, such as SSDs in particular harm the performance when they are almost full. Install and launch the CCleaner program. The tool cleans up several system and temporary directories that one usually doesn't even think about. After the "Analysis" has been completed, you should get rid of all the tick marks that have been set for your standard browser. The WinDirStat can then be used to find and manually delete the largest space hogs.

## 4 Uninstall Useless Software

Installation of one-use software is also a common cause for PC slowdown. Accumulated software installations can be tedious to get rid of from the Control Panel. In this case, we recommend using IObit uninstaller, which allows you to select several software and delete them all at once.

## 5 Adjust Fan Control

Whilst fans help dissipate heat from PCs and notebooks, it's also one of the major reasons dust buildup occurs. To change the fan settings from Windows, you need to access the "Processor Power Management" settings, which can be found in Control Panel under "Power Options > Edit Power Plan > Change Advanced Power Settings".



# Refreshing Your PC

## 1 Cleaning The Vents

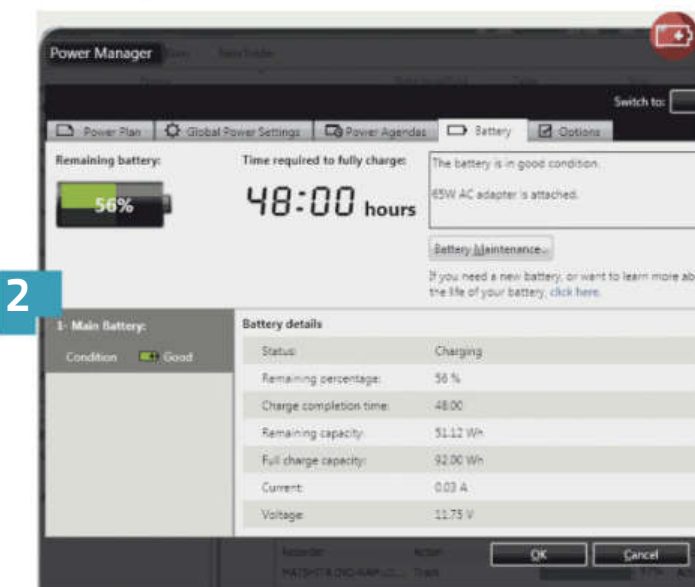
There's one sign of aging that affects many, if not all computers. With PC cooling systems, a fan pushes air through vents. In time, these vents are bound to be congested with dust, which means the fans won't be able to cool off components efficiently, forcing them to spin faster, which in turn results in a very noisy fan, higher temperatures and a CPU that runs at lower clock speeds, due to thermal throttling.

When the PC has been opened, a vacuum cleaner can be used to remove the dust. However, ensure that the cooling fan is held in place, in order to prevent its rotation from subjecting the mainboard to an over-voltage. Notebooks often have to be completely disassembled, so that the vents can be cleared up.

## 2 Taking Care of The Battery

Notebook batteries suffer a capacity loss during each charging process, even partial charging processes. The battery should always be charged completely, discharged and re-charged at least once a year. Thanks to this, the charging electronics can measure the remaining capacity and adapt themselves to it, which optimises the charge control system and the display accuracy of the remaining runtime.

Some notebook manufacturers supply a tool that guarantees an uninterrupted and complete calibration cycle. Alternatively, this function could be implemented within the BIOS of the notebook. With the help of battery management tools, you can, among other things, configure the system such that the charging process only begins when the battery level has already sunk to 90 percent. This reduces the number of charging cycles that take place during



network operations. Furthermore, the charging process should be halted at the 97 percent mark, since the last few percentage points subject the battery to an especially heavy load. If a new battery needs to be used, you should obtain an original replacement part, as they are usually the most long-lasting.

# Preventing Damage To Your Computer

**Clean Air:** The amount of dust that gets into the air inlets located at the lower sides of PCs and notebooks should be kept to a minimum. You should ensure that these devices are kept on flat, clean surfaces – not on carpets (PCs) or sofas (notebooks). The exterior of the device should be cleaned regularly. This preserves the appearance of the computer and helps prevent congestion.

**Ventilation:** Insufficient air supply results in the components being heated up, which in turn leads to down-sampling and subjects the electronics to an increased degree of wear and tear. You should not push the PC into excessively narrow gaps or use it as a storage surface.

**Shocks:** Sudden impacts are deadly for hard drives that are in operation. Consequently, you should be very careful when you are moving notebooks and USB hard drives, especially if the devices are being placed on hard surfaces.

**Thunderstorms:** Lightning strikes can subject power lines, telephone lines and others to over-voltages. In the worst-case scenario, this can destroy PCs and notebooks at the same time. To avoid this, use an over-voltage protection mechanism for the socket.





# Cleaning Android Devices

## 1 Software Updates

New Android operating systems typically run smoother than previous-generation ones. You should check the About section in the Settings menu to check which version of Android you're running, and then check the Software Update menu to see if there are new updates for your phone.

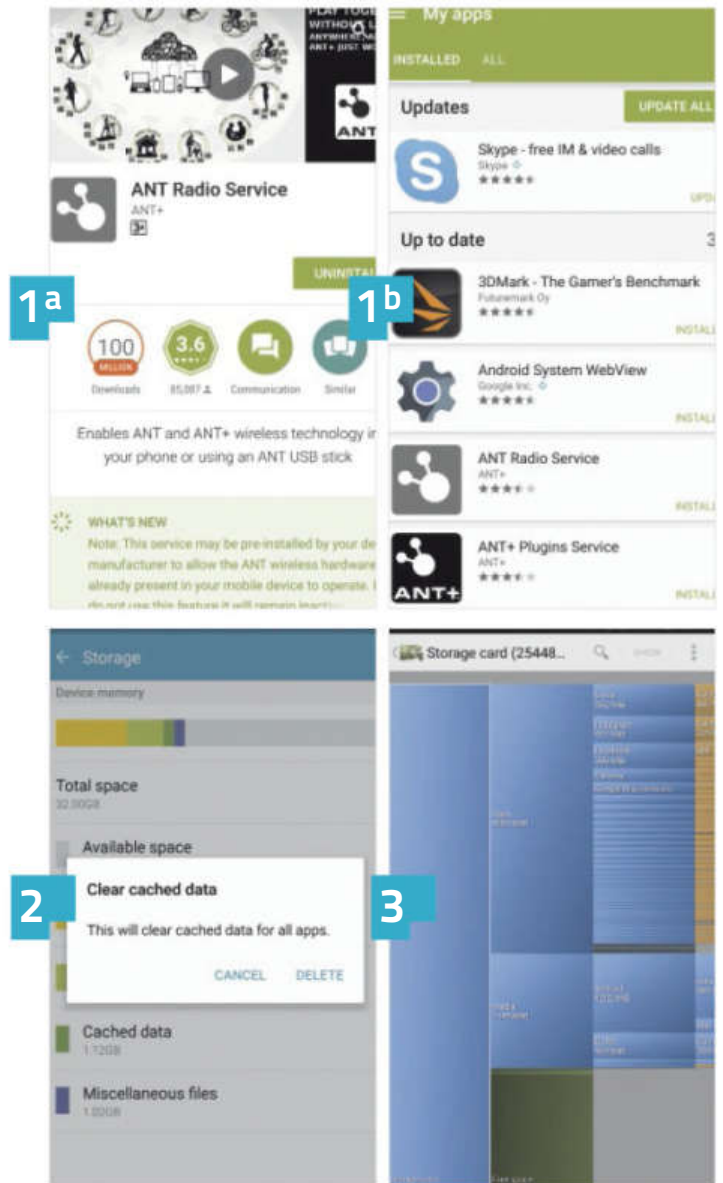
If you're running on anything lower than Android 4.1, you should consider upgrading to a new custom ROM. To delete apps that you rarely use, simply open the Google Play Store, head to 'My Apps' > 'Installed Apps' and uninstall apps that you no longer need, especially if they are launched automatically during restart. Use the 'Update All' function to update all the remaining apps.

## 2 Clear The Cache

If individual apps are starting to give you problems repeatedly, try accessing 'Settings' > 'Apps' menus and tap the app in question and see if emptying the cache solves the problem. If it doesn't, use the 'Delete Data' option which resets the app to its factory settings. To empty the cache for all the apps, go into the 'Storage' settings menu, and the option to clear all cached data should be there.

## 3 Clean Up Memory

The DiskUsage app from the Play Store will help you find the largest memory hogs on your Android device by providing a graphical representation of the directories and files. Tapping on these items will allow you to delete the files immediately. 🗑️



# Protecting Mobile Devices

Mobile phones and tablets are designed to be robust, but are still susceptible to wear and tear, as they are always handled and used, and can still be accidentally dropped, resulting in damaged parts. These are some important points to keep in mind when getting your mobile devices maintained.

**Protection from damage:** Keys that are placed in the same pocket as a phone will eventually scratch your phone's display unless you have a screen protector on. It's also recommended that you buy a case for the phone, as insurance in the event that you accidentally drop your phone. Bumpers and screen protectors offer extra protection, and you should also consider them for tablets, especially if they're being used by children, or if you're bringing them along for trips.

**Protection from heat and moisture:** High-temperature operations, or leaving your mobile devices in the car can leave lasting damage on your devices, especially the battery. In case this happens, you should leave the device switched off until it cools down to room temperature. That said, the battery charge lasts for a shorter time if the device is operating under low temperatures. In this case, the danger is that condensed water may seep in when you return to warmer climates. In such cases, if the insides of your phone have moisture in them, turn the device off, open the covers and let it dry.



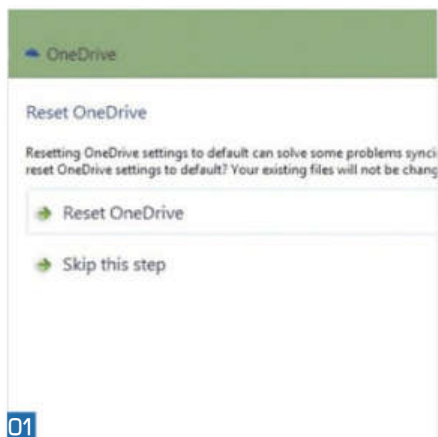
# Tips & Tricks

OCTOBER 2015

## WINDOWS

### 01 WINDOWS 8 Examine OneDrive Cloud storage and reset if needed

Since Windows 8, OneDrive is firmly anchored in the Windows operating system. If the online storage is giving problems, you can reset OneDrive; this cannot be done directly as it does not involve just one program. Microsoft has provided a diagnostic tool for problems with OneDrive, on their website [windows.microsoft.com/en-us/windows-8/onedrive-troubleshooter](http://windows.microsoft.com/en-us/windows-8/onedrive-troubleshooter). This tool eliminates the problems and resets the cloud storage for you. Download the tool from Microsoft and open it by double-clicking on it. Start the diagnosis by clicking on "Next" and in the next step decide whether you wish to send information to Microsoft. This will help only



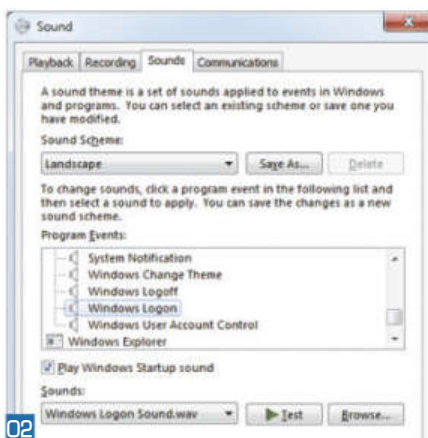
In case of problems with OneDrive, the online storage can be repaired using a diagnostic tool from Microsoft

in improving OneDrive and is not required for the reset. Select "Reset OneDrive" and then close the troubleshooting.

If the diagnosis tool does not work, then OneDrive can be reset manually. For this, use Windows PowerShell. Open the search function with [Win] + [Q] and type "powershell". Then right-click on the result and select "Run as Administrator". Close OneDrive where you type "SkyDrive.exe / shutdown" and press [Enter]. The reset works with "SkyDrive.exe /reset". Then reopen OneDrive with "SkyDrive.exe" and restart the PC.

### 02 WINDOWS 7 Select your own music as Windows start sound

Windows 7 plays its popular start sound at every start. You can change this Start



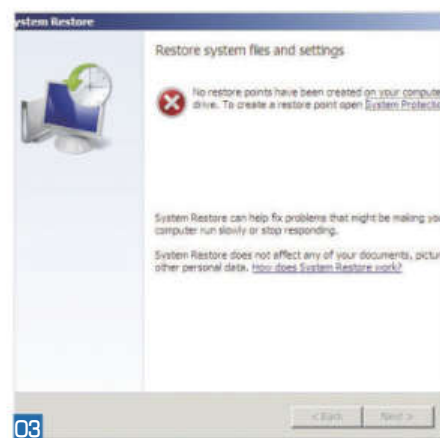
Search in the list for "Windows Log on" and assign your own WAV file to the same

sound to your liking. If you want to use your own music as Windows start sound, then you have to convert the audio file into the WAV format - for example, with the help of the free program Super 2015. Start the tool and drag the desired audio file to the program window. Select the option "WAV(Audio Only)" under "Select the Output Container" on the top left. Click on "Encode" to start the conversion. Small tip: Select a short clip as long sound files cannot be played back. In order to use the sound clip as Start sound, open "Control Panel", go to the category "Hardware and Sound" and click on "Change Sounds" in the section "Sound". A list of all the Windows sounds will now appear. Look for the item "Windows-Login" and select it. Click on "Search" and select the tune converted to a WAV file. Finally, set a check mark for "Play Windows Start Sound" and save the changes by clicking on OK. Restart your computer and you will now hear your own selected sound when Windows starts.

### 03 WINDOWS What to do when the system restore does not work?

If the system restore under Windows no longer works, there may be several possible causes. We will show you how to resolve the problem using a systematic approach so that you do not have to delete your entire system and in turn lose valuable data.

If the system restore has not been done properly or aborted prematurely then try again. In most of the cases, it works at the second or third attempt. Under certain conditions, the time of system restore can



If Windows does not find any restoration points then most probably it has deleted them

also be critical. If a system restore time is defective then select an earlier or a later time.

The antivirus programs must be anchored deep into the system so that they can protect your computer against attacks. As antivirus programs often fail or no longer function after a system restore, you should disable the software before a system restore. If this too does not work, uninstall the antivirus program.

If this does not yield anything, start Windows in the safe mode. Only the services and processes that are necessary are loaded in this mode. Try to restore the operating system in this mode. The system restore deletes the existing restoration points after a specific time. Resetting to an earlier state is then no longer possible. In future, if you wish to avoid problems with system restore, you can take help of an alternative Backup software. The free programs Paragon Backup & Recovery Free, Easeus Todo Backup Free or Genie Timeline Free 2015 can not only backup and restore your system but also save the backup on an external medium.

## 04 WINDOWS

### Create an undeletable folder and delete it again if needed

If you wish to keep your data in a safe place then you can create an undeletable folder under Windows. For this, press [Windows] + [R] so that the command "Runs" opens. Here, type "cmd" and confirm with OK. Then type the command "md con\" or "md aux\" and confirm with [Enter]. Now create a folder with the name "con" or "aux" in My Documents. You cannot delete this folder using the standard methods.

If you wish to delete this folder again, delete or move all the data from the folder and now type the command "rd con\" or "rd aux\".

## 05 WINDOWS 7

### Design libraries by changing the icons individually

If you wish to personally design your own libraries under Windows 7, you can change the icons of the same. Open Windows Explorer with [Windows] + [E] and type the following path in the navigation line



05 Use new icons to personalise your libraries

above: "C:\Users\XXX\AppData\Roaming\Microsoft\Windows\Libraries". Here, replace the "XXX" by your Windows username. You will now get an overview of your libraries. Right-click on the desired library so that the context menu opens. Click on "Open with" there and select the program "Editor".

In the text now displayed, you will find the entry '<isLibraryPinned>' relatively much above. Insert '<IconReference>C:\Users\XXX\Desktop\bild.ico</IconReference>' directly under it in an empty line where you will again replace "XXX" by your username. If necessary, also adjust the remaining path specifications.

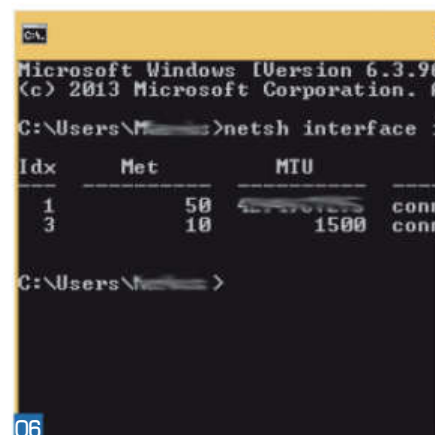
Numerous icons that you can use for your library can be found online – just search for "Windows 7 Icons". Place the desired image file in a folder of your choice and, if required, create the path in the Editor. Save the file in the Editor using the key combination [Ctrl] + [S] and close the window. The library will now have the assigned icon.

## 06 WINDOWS

### Speed up the DSL connection using the command prompt

There are dime a dozen optimisation tools for the Internet connection. If you do not wish to install any new program for the same, then you can also tune your DSL connection using Windows on-board resources. The key point here is the Maximum Transmission Unit (MTU). This MTU specifies the maximum size of the data packets sent.

To find out whether your MTU is set too high, run the command prompt as Administrator and type "netsh interface ipv4 show interfaces". Search for the connection



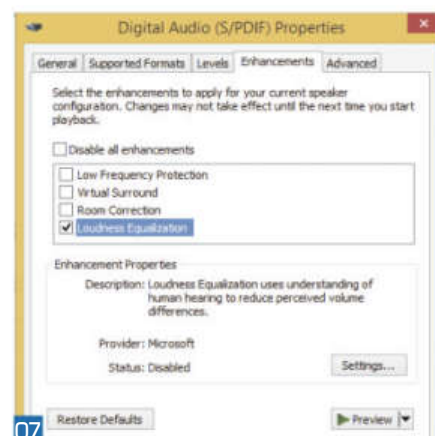
06 The command prompt will show a somewhat higher value set for the MTU

from which you wish to change the MTU. Note the value under Idx. The optimal value for MTU is at 1492. If the command prompt shows another value, type the command "netsh interface ipv4 set subinterface XX mtu=1464 store=persistent". In this case, replace the value "XX" by your noted Idx value. The MTU is set to 1464 with this command because 28 Bytes are used by the packets themselves. It is a simple calculation:  $1464 + 28 = 1492$ . Confirm the change with [Enter]. The system further gives an OK as a confirmation. Repeat the first command to ensure that the changes have been incorporated.

## 07 WINDOWS 7

### Automatically adjust the volume of music playback

When you playback music on the PC or Notebook, many songs are played at different volume levels although you do not change the loudness. You can



07 Windows can automatically adjust the loudness of different songs



now automatically adjust the volume of your songs using the automatic volume adjustment from Windows 7. For this, go to the Start menu and type "Manage Audio Devices" in the search field. Then click on the search results. When you are in the Sound settings, click once on your loudspeaker and then on the option "Properties".

Go to the tab "Enhancements" in the settings window. In the list, scroll down to the bottom and set a check mark before the option "Loudness adjustment". Now confirm these changes with "Apply" or "OK". Windows will immediately and automatically adjust the volume of the music played back.

## OFFICE

### 08 EXCEL Enter and analyse gas, water and power counter readings

Energy has become expensive. Using a simple Excel table, you can manage and analyse your counter readings. You should label the table with the consecutive months in a descending manner in order to get a concise listing. Tip: If you enter the months in the format "01/2015", Excel will convert them automatically into an appropriate date format like "Jan 15". When you have entered the month in the first cell, then cells under it can be automatically filled with the consecutive months. Subsequently, label the adjacent columns as the counters for gas, water and power. Then fill your table with the corresponding values. It is logical to enter the costs directly in Euros as it will be a uniform format for all counters.

Using a line diagram, the cost

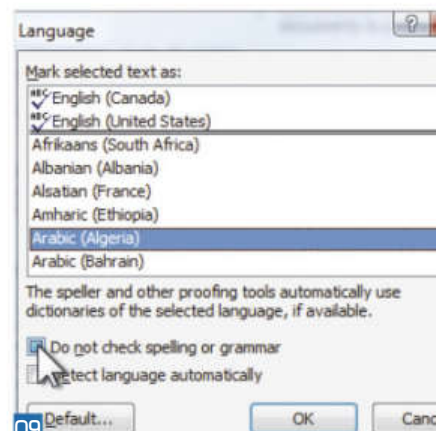
development over several months can now be shown. Select all the cells that belong to your table - including the labels for months and counters. Go to the tab "Insert". In the "Diagrams" area, go to "Line" and select one of the 2D line diagrams. Excel will recognise this information from the table automatically and will enter it into a suitable line diagram. You can then individually read the cost development for every counter in this diagram.

If you wish to make changes to the layout of the diagram, just click on an element from the same. You can then make various adjustments in the tab "Diagram tools".

The analysis using colour scales is another alternative. In this case, the cells are automatically coloured with a specific colour according to the values. Using the mouse, select an entire column, for example, column B for the Gas counter. Then select "Conditional formatting | Colour scales". A scale from red to green makes sense where red indicates higher costs while green indicates lower costs. If you have decided on a variant, then Excel will automatically colour the values from the column selected earlier. As soon as you add a new value, the colour will be adjusted accordingly.

### 09 WORD Change the language of the Spellcheck for individual sections

You can easily change the language in the automatic spellchecker from Word. This is particularly useful when you are composing texts in another language. While doing so, you can not only change the language for the entire text but also change it for

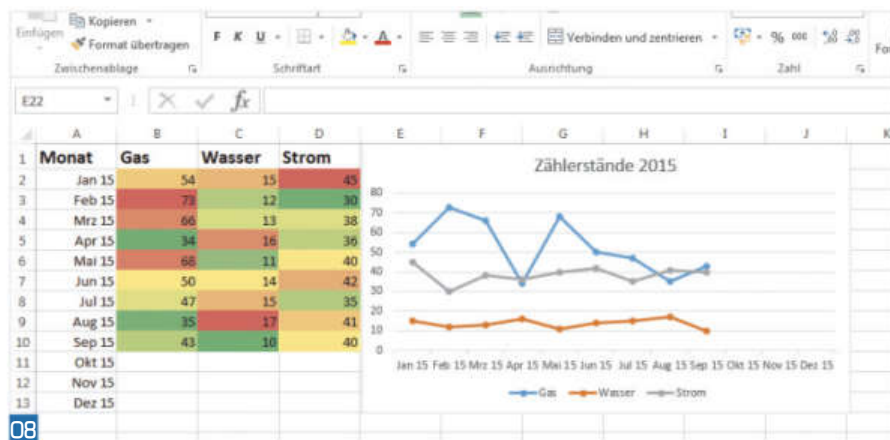


The language of the spellcheck correction can also be selected for individual sections

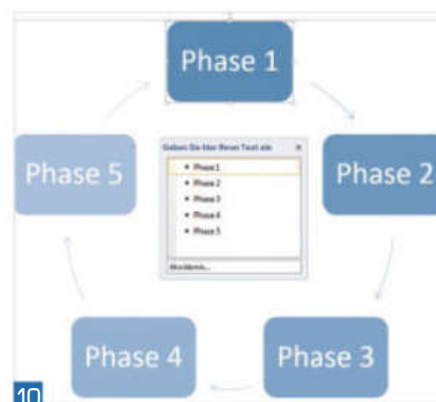
individual sections. First select the text for which you wish to change the language. If you have not yet written the text, then set the cursor at the point where the text is supposed to begin. Click on "Set language for proofing tools" in the group "Language" in the tab "Review". Accordingly, select English, French, Italian or others in the "Language" dialog field. Now, when you start typing the text, it will be automatically reviewed in the selected language. If you wish to change the language again, then go to the dialog field "Language" again.

### 10 POWERPOINT Create meaningful arrow diagrams in a few steps

With the help of an arrow diagram in PowerPoint, you can perfectly illustrate various steps for a presentation: For this, click on "New slide" and select "Title and contents". Choose the third icon in the upper row i.e. "Insert SmartArt graphics". Subsequently, you can select various image



The line diagram immediately shows the development of energy costs



You can create meaningful diagrams using SmartArt images

types. The best option is to look for one from the categories "Process", "Cycle" or "Relationship". The arrow diagram can be found below in the screenshot in the "Cycle" category. Select the desired diagram by clicking and then fill the corresponding fields. If a field is too much, then select the same by clicking on it and tap on the key [Del]. If you wish to edit the arrow diagram further in PowerPoint, simply click in the corresponding field and enter a new title there.

## HARDWARE

### 11 NOTEBOOK

Am I being spied upon by unknown people through my laptop webcam?

If you are afraid that you are being watched through your laptop camera then you are not alone – many others feel the same way. The most effective and secure protection against webcam espionage is putting a sticky note, patch or an adhesive tape on the camera. The other alternative is to disable the webcam but the hacker can reactivate it easily. Press [Windows] + [R] so that the "Run" command opens. Type "devmgmt.msc" and confirm with OK.



11

Using infiltration malware, unknown persons can spy on you through your own webcam

In the Device Manager, open the category "Image Editing Devices" and search for the camera. Right click on the entry and select "Deactivate". If you never use the camera then you can also select "Uninstall". Select "Activate" or "Install" if you want to use the camera again.

computer in a very bright environment or outdoors. On the contrary, glossy displays, in this case, give out such a strong glare that they can hardly be used or cannot be used at all. While fingerprints or dust particles are immediately visible on glossy displays, you do not need to clean a matte display so often.

### 12 MONITOR

Matte or glossy display – which monitor type is better?



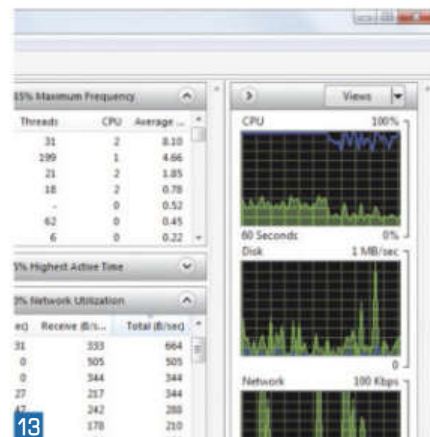
12

The language of the spellcheck correction can also be selected for individual sections

When we speak about Notebook displays, you have a choice between a matte and a glossy display. Most of the modern notebooks today are equipped with a glossy display. This guarantees an optimal display quality, and contents appear particularly rich in contrast and details. Matte displays are less common. Their strength is good legibility if you are working with your

### 13 HARD DISK

Display the consumption of a hard disk in Windows



13

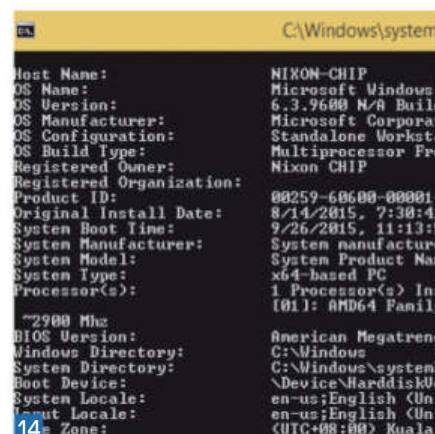
The resource monitor finds space-eaters and monitors the consumption of your disk

With the help of a useful function, you can see the consumption of the hard disk in Windows. Press [Ctrl] + [Alt] + [Del] and go to the Task Manager. Here, go to the tab "Performance". Subsequently, select the option "Resource Monitor". A new window will open. In this window, click on the tab "Disk". You will now find the programs that consume your disk the most, under "Processes with Disk Activity".

### 14 NOTEBOOK

How to find out the age of a purchased used laptop

How old is my computer? This interesting question comes up after you purchase a used device. The easiest way to find out the age of a laptop is to look at the labels on the bottom of the device. The



14

The resource monitor finds space-eaters and monitors the consumption of your disk

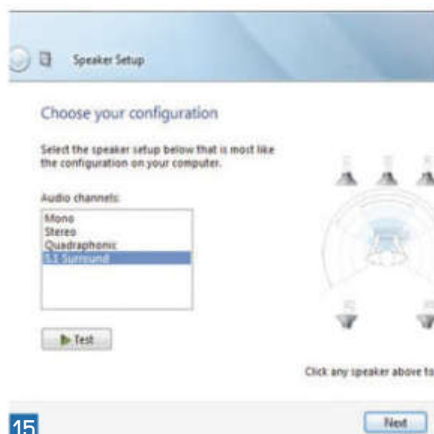
manufacturing date is mostly printed there. Depending on the manufacturer and model, the labels are designed differently. You will find the year and month of manufacture mostly under the model number on a label. If the original version of the operating system is installed on the device, you can also determine the age using Windows. Press [Win] + [R], type "cmd" in the text field and press OK to open the command prompt. Here type "systeminfo" and press ENTER. The computer will then display a lot of information regarding your system. When all the results are listed, search for "Original installation date". The time specified here corresponds to the manufacturing date.

## 15 SOUND CARD Resolve problems of sound transmission to stereo system

If the sound is not getting transmitted from the computer to the stereo system, you need to check a few things: First, take a look at the cables. Are they intact and correctly connected? In case of stereo systems, the cable is usually plugged into a white and a red Cinch/RCA connector. The sound card has connectors for 3.5 mm backs and the green connector denotes the audio output and the orange coloured one is the Line-in connector.

Also ensure that you have enabled the "Line-in" option in Windows via "Control Panel | Sound" and the volume is set at high. For your stereo system, you should note that you have selected the right channel and also that the loud speakers have not been accidentally muted.

Perhaps the sound card is defective.



15 Try audio output via alternative loudspeakers to identify cable problems

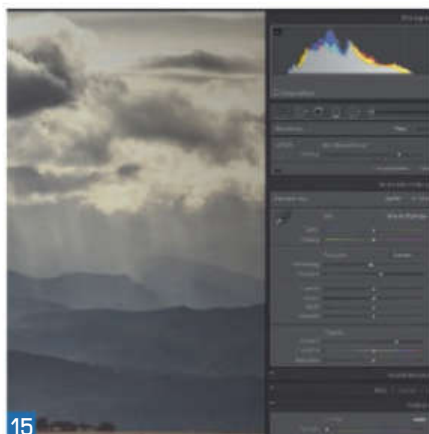
Therefore, test the audio output using an alternative system or loudspeaker. If the output works without any problems, then there is a defect, either in the cable or in the system itself. In case of doubt, consult an expert before you open the stereo system yourself. On the contrary, replacing a defective sound card is easy - at least on the desktop PC.

## PHOTOGRAPHY

## 16 LIGHTROOM Let the clouds in the photo look more dramatic

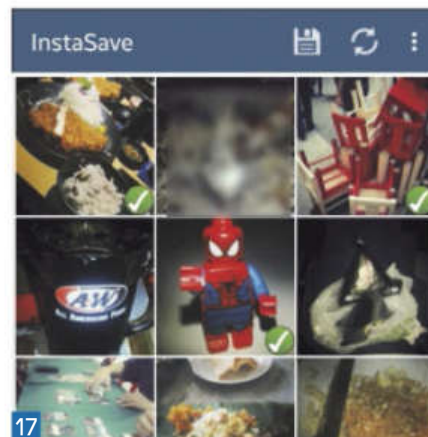
If you have forgotten the graduated filter during photography, you can insert its effect later using Lightroom. We will show you using the example of storm clouds. Take your photo in the RAW format and you will have a clearly larger playroom while editing in Lightroom. Take the shot when the sky actually appears dramatic. Many times you can get the best shots when there is a storm or when it is raining. Take the photo with the least possible focal length. Thus, a larger part of the sky will be captured and the effect will be more intense.

Now load your photo in Lightroom in the development mode. Go to the 'Graduated filter' tool by pressing [M]. Draw a gradient from the top over the photo. The middle auxiliary line, in this case, should somewhat coincide with the horizon line. Increase the values for 'Contrast' and 'Clarity'. You can pull the slider a bit downwards for 'Exposure'. Experiment with the settings till you are happy with the result. Also take care not to reduce the exposure too much. The photo, otherwise, will quickly start appearing unrealistic.



15 A Graduated filter and more contrast in Lightroom will intensify the clouds

## 17 INSTAGRAM Download all photos on the PC or smartphone



17 InstaSave helps you backup all photos from Instagram on to your smartphone

If you wish to locally backup photos published on Instagram then there are various options available for it, such as the app InstaSave which is available for Android as well as for iOS. After you have started the app and logged in to your Instagram account, you can download all the photos from your own feed and also save photos which you have liked. You can easily define the folders, in which these photos should be stored. If you wish to download videos then you have to purchase the add-on function through an in-app purchase.

Meanwhile there are various programs which can help you backup your Instagram photos on the PC. One of them is SocialSafe and can be found on [www.socialsafe.net](http://www.socialsafe.net). With this app, you can not only download photos from Instagram but also from many other social networks.

Another program is the Instagram Downloader. With this app, you can collect the Download links for your favourite photos and photo galleries. Simply search for the corresponding username of the Instagram photographer. Using another tool like jDownloader, you can also save the photos of the download links. These tools are given on the DVD or are available on [www.chip.de](http://www.chip.de).

## 18 PHOTOSHOP Insert a Fish Eye effect later in a photo

Not everyone can afford a fisheye lens. You can quickly and easily create the distortion



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This device works in tandem with the HIPC 700 Homeplug IP Camera, and is the first of its kind to use Homeplug AV-compliant powerline communications technology. Thanks to its advanced PnP technology, you will be able to see all the HIPC 700 IP cameras on one device, via the PlugCAM app, anywhere, anytime, regardless if you're connected via WiFi, 3G or 4G.



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18

InstaSave helps you backup all photos from Instagram on to your smartphone

created by such lenses, using Photoshop. Open your photo in Photoshop and create a duplicate layer with [Ctrl] + [J] (Windows) or [Cmd] + [J] (Mac). Now click in the menu bar on "Edit | Transform | Distort". In the tool settings, select "Fisheye" option. By moving the grid, you can adjust the intensity of the effect as you like. Then click on the checkmark to save the effect.

19

## LENS

**Cleaning a dirty or dusty lens correctly**

Use the following tools to clean your camera lenses: If the lens is very dusty then first grab a lens brush and carefully remove the dust such that there are no scratches on the lens. Alternatively, you can also use a bellow which is especially meant for camera lenses.

Basically lint-free towels are always the preferred choice. These can be spectacle-cleaning towels or microfibre towels. Even soft leather towels are lint-free. The Lenspen is an effective tool in the fight



19

Use the right tools to quickly and thoroughly clean your lenses

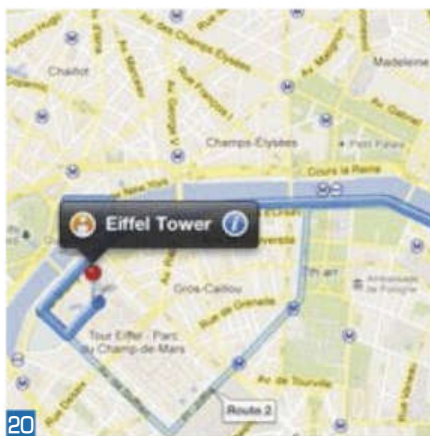
against a dirty camera lens. It generally is made up of a small brush and a velvet surface which facilitates the cleaning of lenses.

## MOBILE

20

## IOS

**How long can the map service Apple Maps be used without an Internet connection?**



20

iOS saves the viewed maps for some time in the Maps app & you can use them without Internet

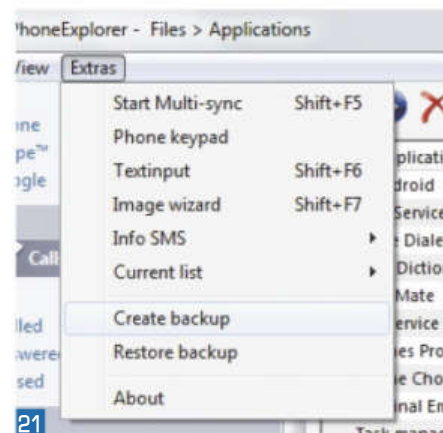
If you want to use Apple Maps even when offline, they will work only for a very limited time. The navigation app is clearly designed for online use. Nevertheless, we will show you how you can reach your destination without Internet. Open the maps app on your iOS device and go to the desired area or the entire city on the map. You need not go through every individual street while doing so. The already viewed area will be stored for some time. This map section will remain saved after restarting the app. An update from iOS will not hamper the maps. In this way, you can use the desired area offline even while travelling. But it is not possible to use the search and navigation function. The GPS also leaves something to be desired. Although the location does not need any Internet connection, there were errors and breaks during tests.

21

## ANDROID

**Mirror and control the display of the smartphone on the PC**

You can mirror the display of your smartphone on the PC and transfer the contents via project on a screen. Install



21

With this option you can mirror the smartphone display on a computer & control the same via your phone

the app MyPhoneExplorer Client. Activate the function "USB-Debugging" on your smartphone. Then start the app. Now install the program MyPhoneExplorer on your computer. Note that you have to select the adware during the installation process. Connect your smartphone to the computer via the USB cable and start the tool. Select the option "Control cellphone/ Load screenshot" in the tab "Extras". The smartphone display will now be seen on your computer. You can also work on the smartphone or even control the device via the computer.


If MyPhoneExplorer cannot establish a connection or the transfer is too jerky, you must look for a hardware solution.

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## WINDOWS PHONE

**One mail box for several mail accounts**

For every mail account, Windows Phone 8 creates a separate tile and the clarity somehow is lost in this process. If you are using several mail accounts, you should link them with a single main account. Open the Mail account which you want to connect with the other accounts. Tap on the three dots on the bottom right and select "Link postboxes". You will now see a main account which you can link to many mail accounts. Mails sent to these accounts will now land in the postbox of the main account.

Business and private Email accounts can be summarised using the Link function. If you have set up only private Email accounts, then classifying them into priority and spam accounts would be useful. 





*Ninjas getting their groove on!*



*Models holding up the brand new honor 7 smartphones*



*The Lenovo PHAB Plus is a big hit with the young and trendy crowd*



*Ramelle Ramli, Chairman, RSG (left) and Jean de Rivieres, Senior Vice President, Ubisoft Motion Pictures having a light chat at the Ubisoft Park announcement press conference*



*Lee Chong Wei our National Badminton Champion with the new Samsung Galaxy Note 5!*



*Samsung's Brand Ambassadors taking a selfie with the new Samsung Galaxy Note 5*





*Making a phone call has never looked more sexy than this*



*Does the phone come with the model?*



*Everyone having fun at the HP Fanfest 2015*



*Kevin Hagino, Senior Regional Brand Manager, LEGO showing off the new LEGO Ninjago sets*



*A group shot of the participants of the OKI Golf Tournament that was held in Langkawi*



*Cosplayers gather around famed Macross creator Shoji Kawamori for a photo opportunity*





# Hackers Without Borders

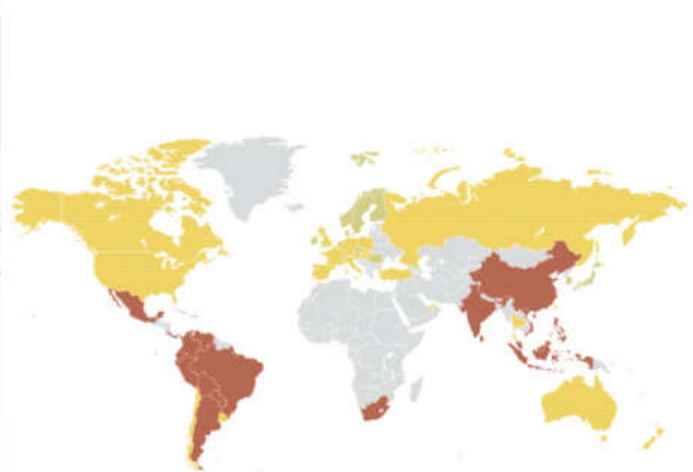
These hackers will hack everything and anything that has electronics and an operating system built into them: Cars, smartphones, and even weapons. We take a look at what makes these devices insecure, and how hackers can jam into them





## Flash Player: A Security Risk?

Google recently disabled Adobe Flash altogether on its Chrome internet browser. Why is Flash so insecure after all these years? What alternatives are out there for the long-running web tool that has been used by web designers and programmers for so many years?

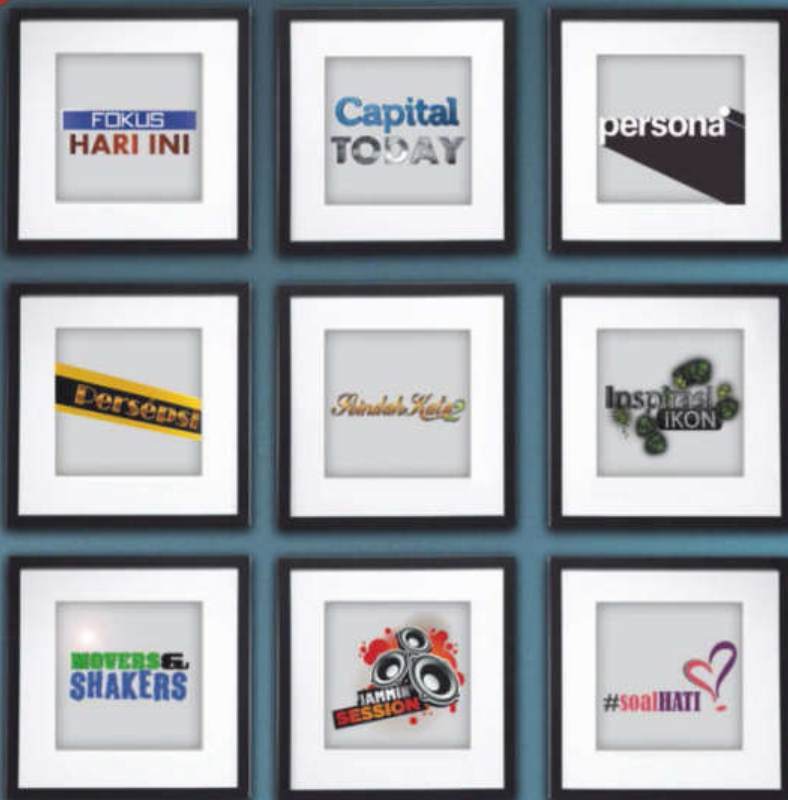


## Maps: Internet Around The World

Much has been talked about Internet connectivity in Malaysia recently. Are you curious about how fast the Internet connection speed is like in other countries? How do we stack up with countries such as Brazil and China?



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Lenovo Technology Ltd. 2015-06-04